REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL

GENERAL NOTES

1. PRESSURE VESSEL DESIGN CONDITIONS
   DESIGN PRESSURE: 100 PSIG
   SERVICE TEMPURATURE RANGE: 33°F–95°F
   FLUID: RANGES FROM FRESH WATER TO SEA WATER WITH
   UP TO 60,000 MG/LITER TOTAL DISSOLVED SOLIDS.

2. HYDROTEST AT 150 PSIG FOR 30 MINUTES. INSPECT ALL JOINTS AND CONNECTIONS FOR DEFECTS UNDER PRESSURE. THERE SHALL BE NO VISIBLE LEAKS OR WEEPING.

3. NO CODE STAMP REQUIRED PER ASME BOILER PRESSURE AND VESSEL CODE, SECTION VIII, DIVISION 1, U–1(c)(2)(f).

4. ALL STEEL SHALL BE DUPLEX STAINLESS STEEL, UNS S32205, AND SHALL CONFORM TO ASTM SPECIFICATION A240 (PLATE/SHEET/STRIP), A276/A479 (BAR), A790/A928 (PIPE), A789 (TUBING), A815 (FITTINGS), A923 (TESTING) OF MOST RECENT ISSUE UNLESS NOTED OTHERWISE, UNS S31803 IS NOT AN ACCEPTABLE SUBSTITUTE FOR UNS S32205.

5. ALL MATERIAL CERTIFICATIONS (CERTS) SHALL BE PROVIDED.

6. ALL PIPING TO BE SEAMLESS.

7. SHOP PREPARATION SHALL SEPARATE DUPLEX STAINLESS STEEL AND CARBON STEEL FABRICATION. AVOID AT ALL TIMES THE CONTAMINATION OF DUPLEX STAINLESS STEEL WITH CARBON STEEL OR OTHER IMPURITIES, ESPECIALLY DURING LIFTING AND MOVING WITH FORKLIFTS. DO NOT MIX HAND TOOLS, GRINDING WHEELS, ETC. BETWEEN DUPLEX STAINLESS STEEL AND CARBON STEEL FABRICATION.

8. WELDING NOTES

   A. WELDING FOR STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING STRUCTURAL WELDING CODES, AWS D1.1, AWS D1.6, AWS D10.11, AND AWS D10.18 OF LATEST EDITION.

   B. USE A FILLER METAL THAT CONFORMS TO SPECIFICATION AWS A5.4 E 2209–XX, AWS A5.9 ER 2209, AWS A5.22 E 2209TO–X. ALL FLUX SHALL BE DESIGNED FOR DUPLEX STAINLESS STEEL.

   C. PRIOR TO WELDING, ALL BURRS SHALL BE REMOVED TO ALLOW FOR COMPLETE FUSION, JOINT SURFACES SHALL BE DEGREASED AND FREE FROM ANY FORM OF CONTAMINATION. THE ROOT SIDE AND FACE SIDE OF THE BASE MATERIAL SHALL BE CLEANED A MINIMUM OF 2" BACK ON EITHER SIDE OF THE JOINT WITH A STAINLESS STEEL WIRE BRUSH OR SANDING DISK AND THEN WIPE CLEAN WITH A CLEANING SOLVENT SUCH AS ACETONE OR MINERAL SPIRITS.

   D. SEQUENCE OF WELDING SHALL BE SUCH AS TO MINIMIZE THE RESIDUAL STRESSES IN THE STEEL.

   E. WELDING JOINTS SHOULD BE PREPARED WITH THE ATTENSION TO SURFACE PREPARATION, EDGE PREPARATION, ALIGNMENT, AND ROOT PASS SPECING. NO TACK WELDS SHALL BE USED AT THE STARTING POINT OF THE ACTUAL ROOT PASS WELD.

   F. ALL GROOVE WELDS MUST HAVE THROUGH PENETRATION AND ABSOLUTE FUSION.

   G. DURING WELDING, EXCESSIVE WEAVING AND WIDE MOLTEN POOLS SHALL BE AVOIDED TO PREVENT EXCESSIVE HIGH HEAT INPUT AND HIGH STRESSES. EXTREAMLY LOW HEAT INPUTS WITH RAPID QUENCHING SHALL BE AVOIDED TO PREVENT PREDOMINANTLY FERRITIC HEAT–AFFECTED ZONES. THE WELDING ARC SHALL NOT BE STRUCK OUSIDE OF THE WELDING BEVEL OR JOINT.

   H. AFTER WELDING, ALL SLAG, WELD SPLATTER, AND OXIDES SHALL BE REMOVED. MECHANICAL CLEANING WITH STEEL BRUSHES OR AN ABRASIVE BLASTING MEDIUM CAPABLE OF TRANSFERRING IRON SHALL BE AVOIDED.

   I. AUSTENITIC FILLER METALS CAN BE USED FOR DISSIMILAR METAL WELDS OF DUPLEX STAINLESS STEEL TO AUSTENITIC GRADES.

   J. THE FERRITE CONTENT OF ALL ACCESSIBLE COMPLETED PRODUCTION WELDS ON THE WELD DEPOSIT ONLY SHALL BE CHECKED USING A FERRITESCOPE. A MINIMUM OF THREE TESTS SHALL BE MADE ON EACH 5 FEET OF WELD. THE AVERAGE VALUE OF THE FERRITESCOPE READINGS ON EACH WELD SHALL BE 25% TO 65%. FERRITE CONTENT LIMITS SHALL BE:
   – IN THE WELD DEPOSIT, 25% TO 60%.

   K. PRIOR TO FABRICATION, PROVIDE A DETAILED WELDING PROCEDURE SPECIFICATION TO PROGRAM MANAGER AND LEAD DESIGN ENGINEER. A REPORT OF THE WELDING PROCESS USED. INCLUDING THE PROCESS CONDITIONS, SHALL BE SUPPLIED WITH THE DELIVERY OF THE FINISHED PRODUCT.

9. CLEAN, PICKLE, AND PASSIVATE THE VESSEL INTERIOR AND EXTERIOR IN ACCORDANCE WITH ASTM A380. FOLLOWING CLEANING, ACID PICKLING SHALL BE PERFORMED USING A SOLUTION OF NITRIC AND HYDROFLORIC ACIDS CODE B IN TABLE A1.1 ASTM A380. PASSIVATION SHALL BE PERFORMED USING A NITRIC ACID SOLUTION CODE F TABLE 2.1, ASTM A380. QUALITY TEST AND ACCEPTANCE CRITERIA USING COPPER SULFATE TEST PER ASTM A967. PRIOR TO CONDUCTING THE CLEANING, PICKLING, AND PASSIVATION PROCEDURES PROVIDE A DETAILED PROCESS SPECIFICATION TO PROGRAM MANAGER AND LEAD DESIGN ENGINEER FOR APPROVAL. A REPORT OF THE PROCESS AND TESTS USED, INCLUDING THE PROCESS CONDITIONS,CONCENTRATION, TEMPERATURE AND TIME SHALL BE SUPPLIED WITH THE DELIVERY OF THE FINISHED PRODUCT.

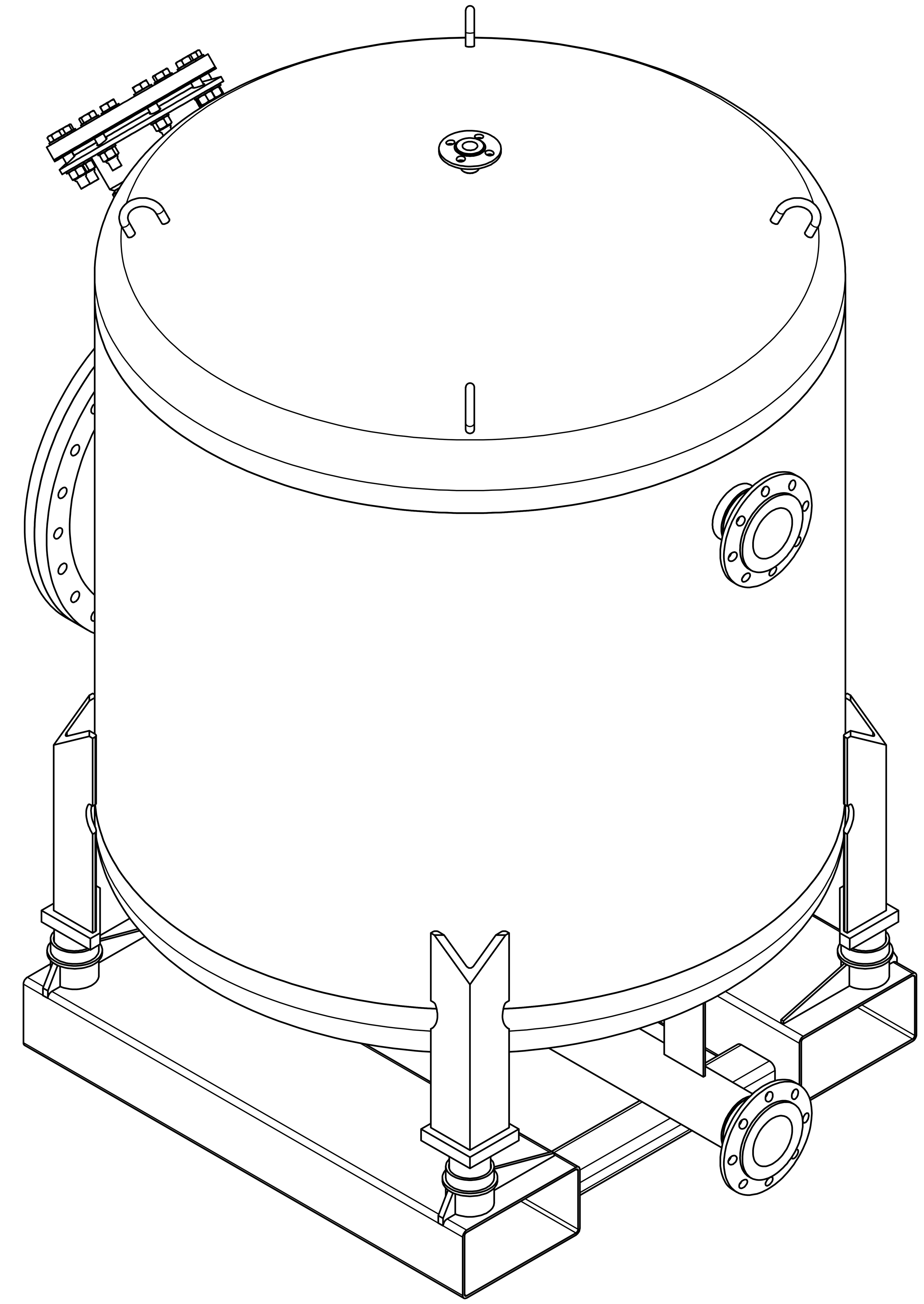
10. REMOVE ALL ROUGH EDGES AND CORNERS ON ALL STEEL.

11. THE APPROXIMATE WEIGHT OF THE PRESSURE VESSEL IS 1900 LBS.

12. ON SITE INSPECTION FOR COMPLIANCE WITH ALL REQUIREMENTS IN THE DRAWINGS WILL BE PERFORMED BY A GOVERNMENT REPRESENTATIVE BEFORE SHIPMENT.

ABBREVIATIONS

AR: AS REQUIRED
PV: PRESSURE VESSEL
SST: STAINLESS STEEL
UNO: UNLESS NOTED OTHERWISE
W.P.: WORKING POINT



54" I.D. PRESSURE VESSEL, ISOMETRIC VIEW
FOR REFERENCE ONLY

PART DASH NO.	NEXT ASSY.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN FEET AND/OR INCHES

TOLERANCES:	
.X DECIMALS	±.03
.XX DECIMALS	±.01
.XXX DECIMALS	±.005
FRACTIONS	±1/8
ANGLES	±1°

PROJ NO.
NFESC DWG. NO. 20161601
DES. DRAWN
CHECKED PDQ
BRANCH HEAD KIT MACK
DIV DIR W. TAUSIG
SATISFACTORY TO
APPROVED GOOFY DATE
COMMANDING OFFICER
APPROVED PLUTO DATE
FOR COMMANDER, NAVFAC

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING SERVICE CENTER
PORT HUENEME, CALIFORNIA 93043

3K TWPS
MEDIA FILTER

SIZE F | CODE IDENT NO 80091 | NAVFAC DRAWING NO.
CONSTRUCTION CONTRACT NO.
SCALE NONE | SPEC NONE | SHEET 1 OF 10

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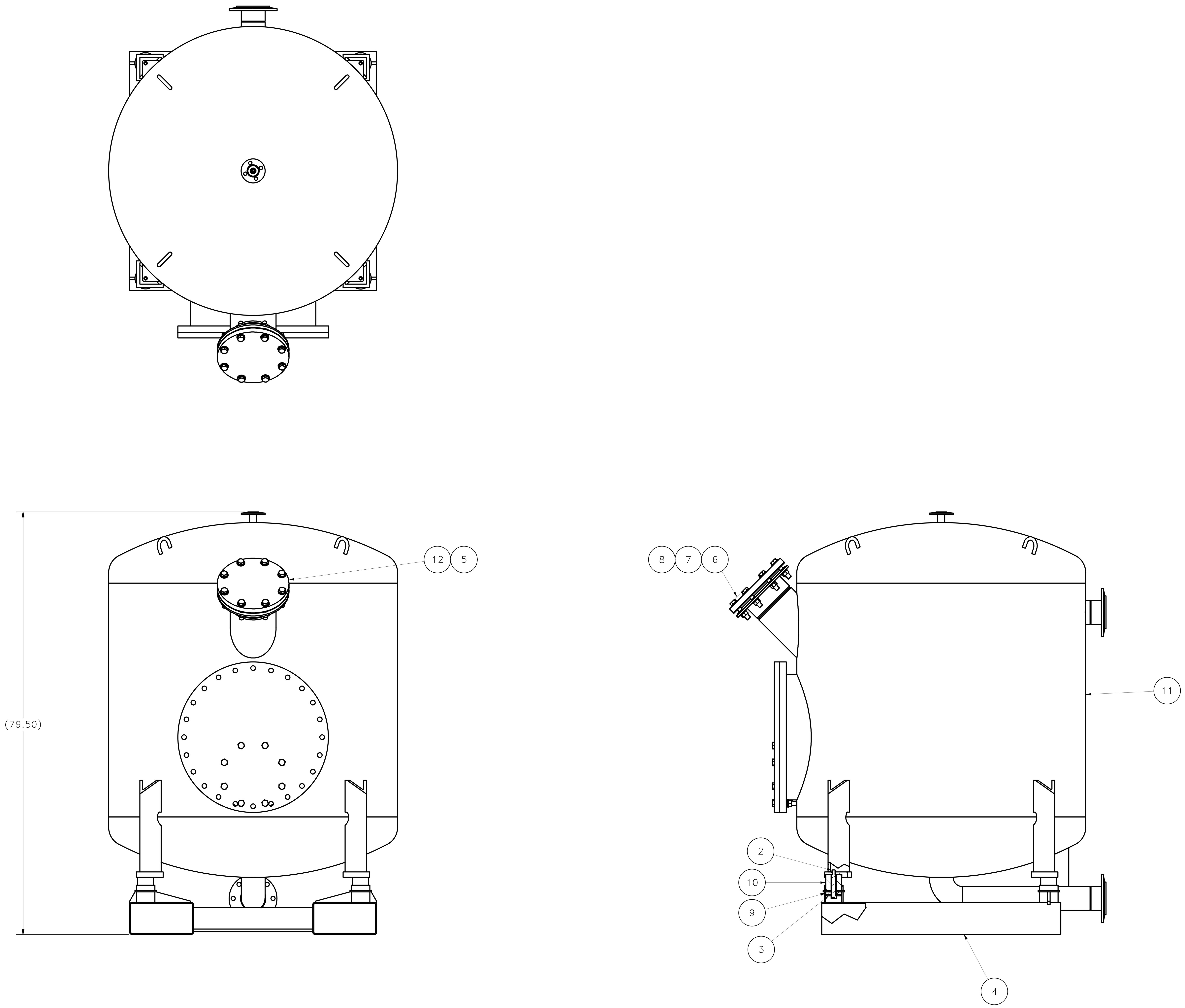
J2011–39

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL



① MEDIA FILTER

NOTES

1. SEE GENERAL NOTES ON SHEET 20121601.

2. FOR THREADED FASTENERS, USE MARINE GRADE ANTI–SIEZE THAT ALSO CONTAINS A CALCIUM SULFONATE THICKENER. A SUGGESTED PRODUCT IS BOSTIC NMBT–8.

QTY	ITE	PART NUMBER	DESCRIPTION	MANUFACTUR	SPEC	MATERIAL
2	12	20121602–12	FLANGE, BLIND, ANSI B16.5, CLASS 150#, Ø8", GLASS FIBER REINFORCED EPOXY RESIN, NSF 61 CERTIFIED		ANSI B16.5	GFRC
1	11	20121603–1	MEDIA CHAMBER WELDMENT			
4	10	20121610–4	POLYURETHANE, ASTM D 2000 M6BG 910 F17		ASTM D2000	POLYURETHANE
4	9	20121610–5	POLYURETHANE, ASTM D 2000 M6BG 910 F17		ASTM D2000	POLYURETHANE
16	8	MS45913/1–12C S6	3/4–10 UNC 2B NYLOCK NUT		MS45913/1A	UNS S31600
32	7	MS15795–822	WASHER; STAINLESS STEEL		NASM 15795	UNS S31600
16	6	MS35307–495S316	3/4–10 UNC X 4 HEX HEAD BOLT, CRES		NASM 35307	UNS S31600
2	5	20121602–5	GASKET, FLANGE, ANSI B16.5, CLASS 150#, 8" NPS, 1/8" THICK, ASTM D2000–08 M2DA 710		ANSI B16.5, ASTM D2000	EPDM
1	4	20121609–1	BASE ASSEMBLY			
4	3	20121610–6	SHOCK MOUNT WASHER		ASTM A666	UNS S31600
4	2	20121602–2	SCREW, SHOULDER, SOCKET HEAD, HEXAGON, 3/4 X 4, CRES		NASM 21472	UNS S30400
	1	20121602–1	MEDIA FILTER			

PARTS LIST

PART DASH NO. | NEXT ASSY.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN FEET AND/OR INCHES

TOLERANCES:
.X DECIMALS ±.03
.XX DECIMALS ±.01
.XXX DECIMALS ±.005
FRACTIONS ±1/8
ANGLES ±1°

PROJ NO.
NFESC DWG. NO. 20161602
DES. DRAWN
CHECKED PDQ
BRANCH HEAD KIT MACK
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COMMANDING OFFICER
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FINAL ASSEMBLY

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CONSTRUCTION CONTRACT NO.
SCALE NONE | SPEC NONE | SHEET 2 OF 10

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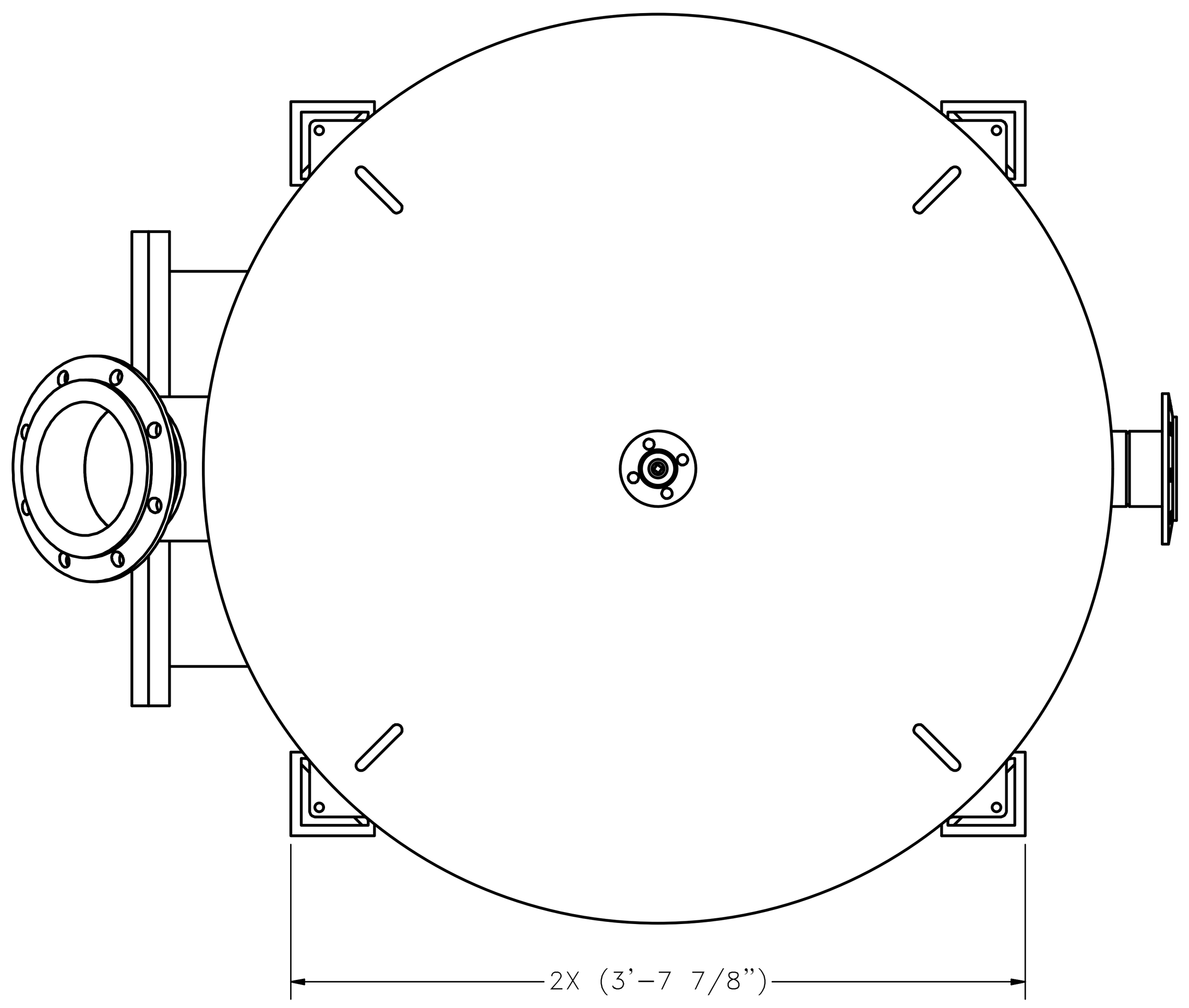
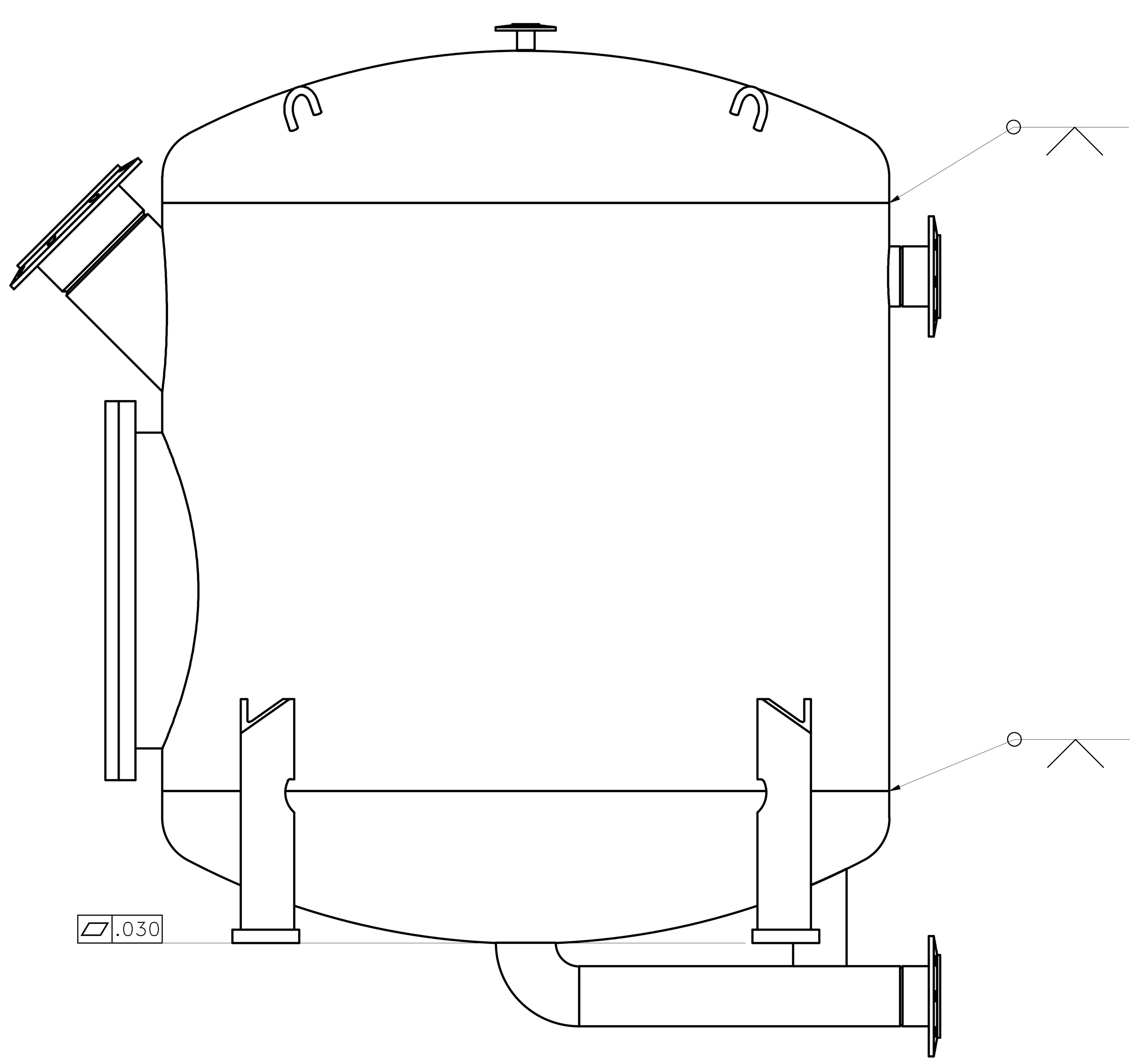
J2011–39

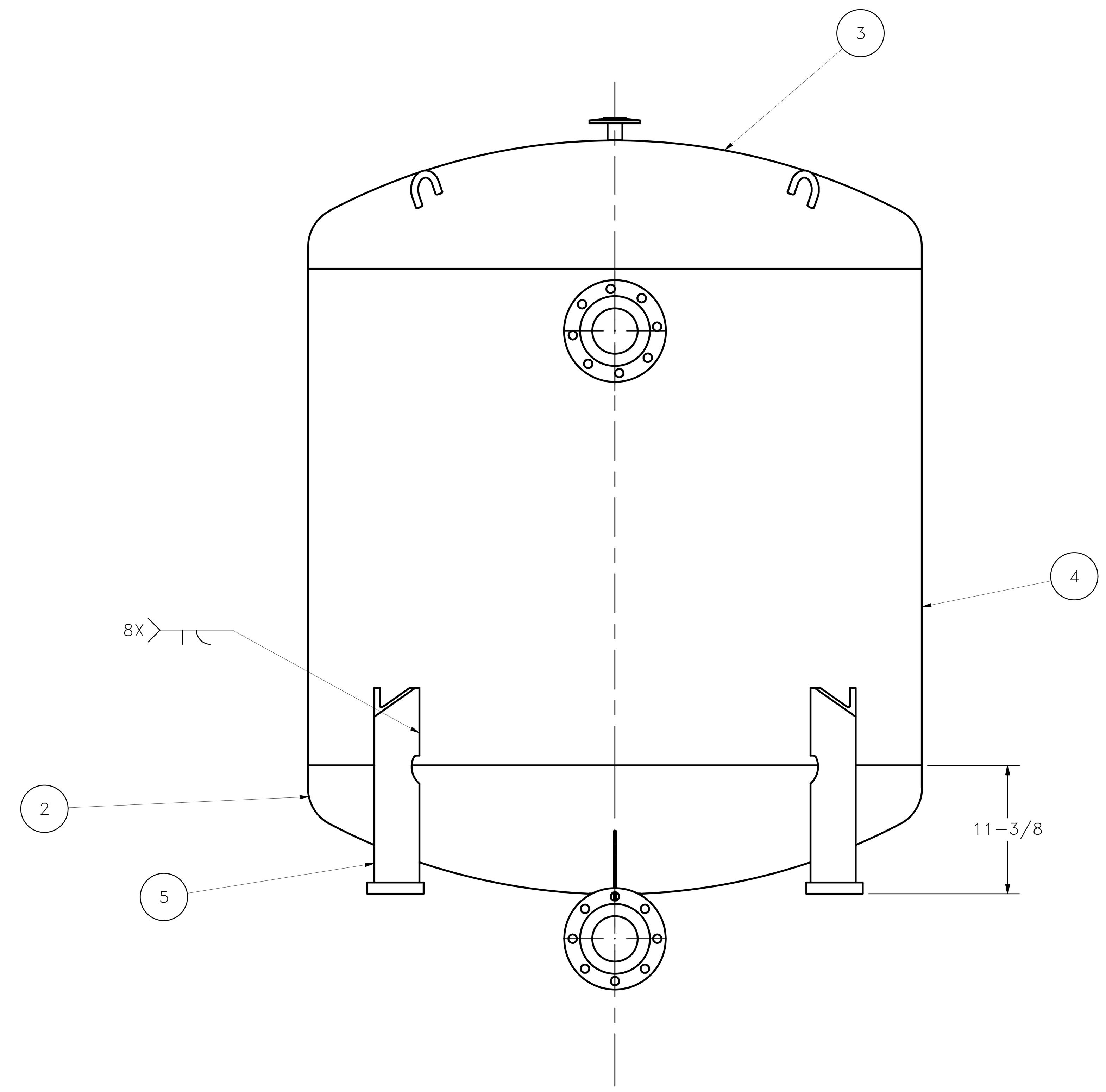
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL

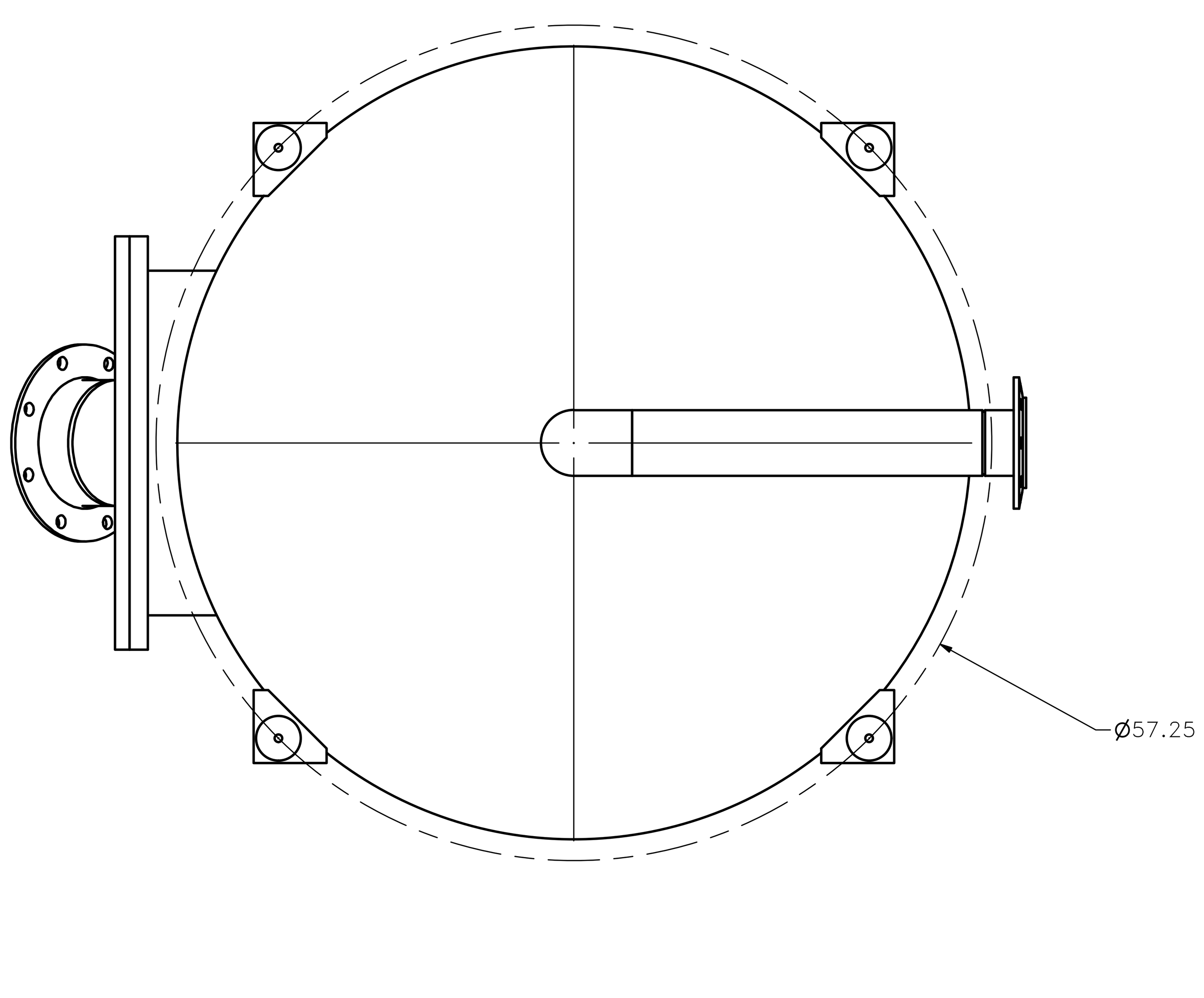
NOTES

1. SEE GENERAL NOTES ON SHEET 20121601.









1 MEDIA CHAMBER WELDMENT

QTY	ITE	PART NUMBER	DESCRIPTION	MANUFACTUR	SPEC	MATERIAL
4	5	20121610-1	LEG ASSEMBLY			
1	4	20121604-1	SHELL, WELDMENT			
1	3	20121605-1	HEAD, TOP, WELDMENT			
1	2	20121606-1	HEAD, BOTTOM, WELDMENT			
	1	20121603-1	MEDIA CHAMBER WELDMENT			

PARTS LIST

PART DASH NO.	NEXT ASSY.
-1	20121602-1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN FEET AND/OR INCHES

TOLERANCES:	
.X DECIMALS	±.03
.XX DECIMALS	±.01
.XXX DECIMALS	±.005
FRACTIONS	±1/8
ANGLES	±1°

PROJ NO.
NFESC DWG. NO. 20161603
DES. DRAWN
CHECKED PDQ
BRANCH HEAD KIT MACK
DIV DIR W. TAUSIG
SATISFACTORY TO
APPROVED GOOFY DATE
COMMANDING OFFICER
APPROVED PLUTO DATE
FOR COMMANDER, NAVFAC

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING SERVICE CENTER
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3K TWPS
MEDIA FILTER
MEDIA CHAMBER WELDMENT

SIZE F CODE IDENT NO 80091 NAVFAC DRAWING NO.
CONSTRUCTION CONTRACT NO.
SCALE NONE SPEC NONE SHEET 3 OF 10

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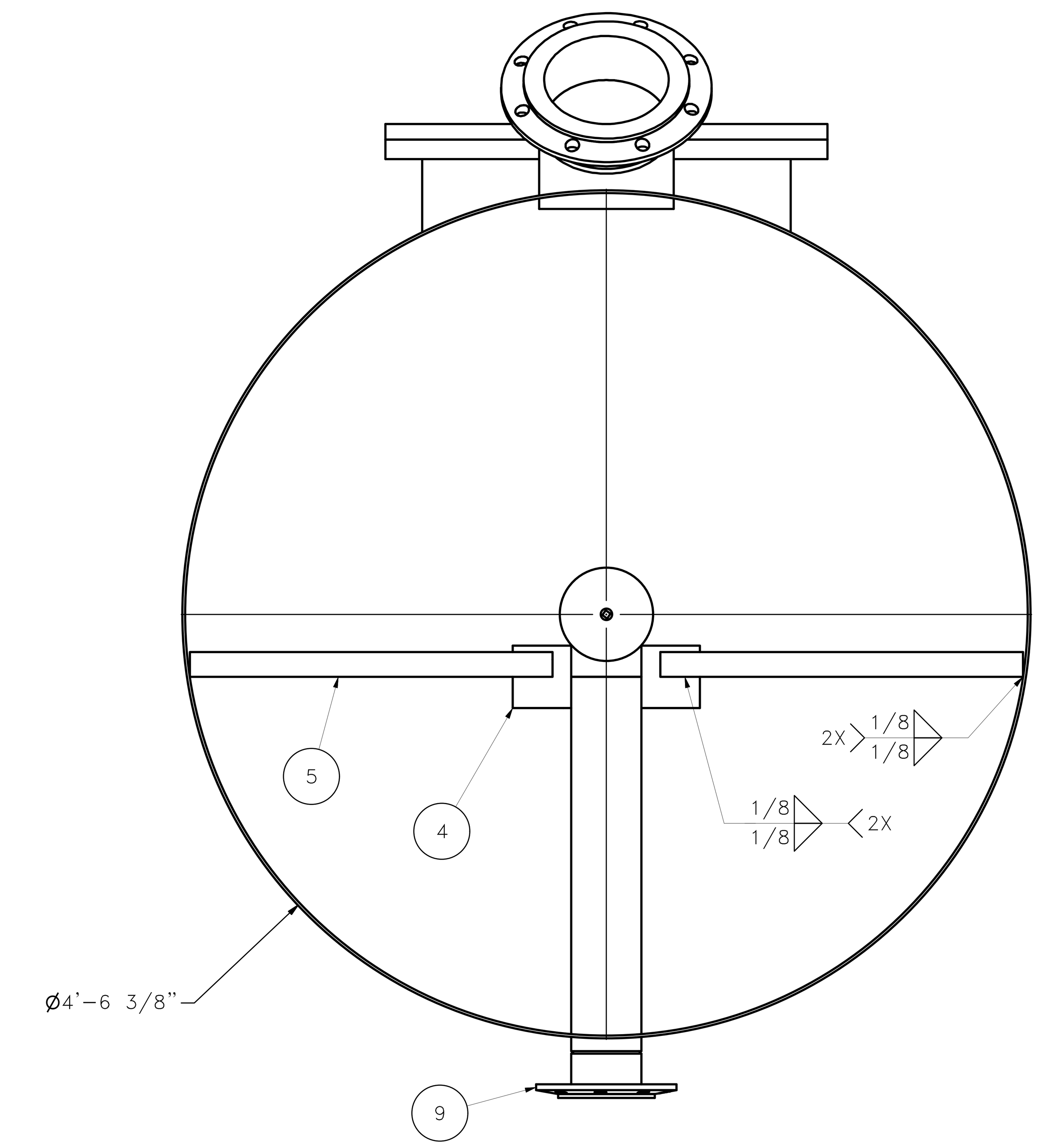
J2011-39

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL

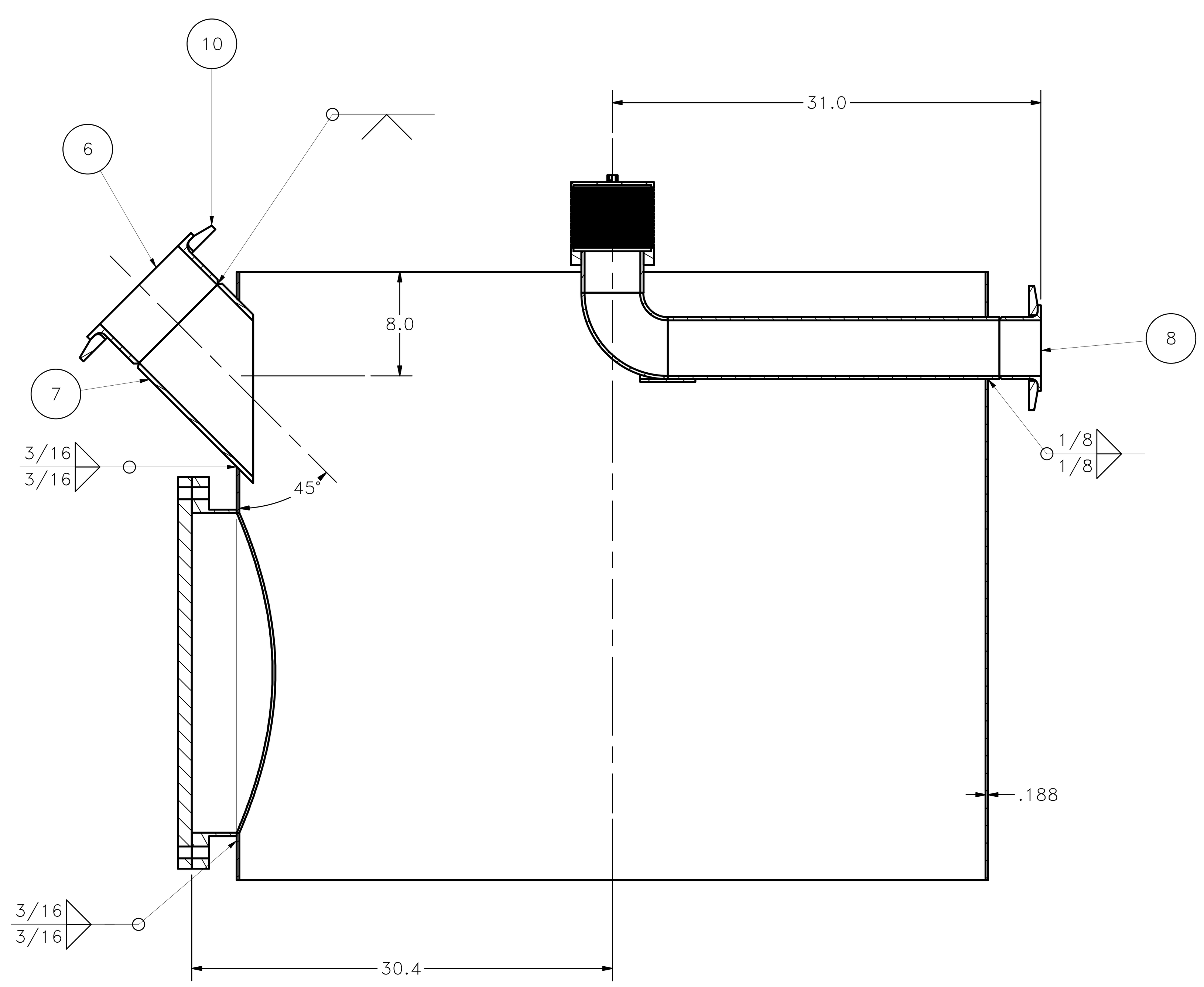


NOTES

1. SEE GENERAL NOTES ON SHEET 20121601.

2. LOCATION OF SHELL SEAM IS OPTIONAL. LOCATE ALL FITTINGS AND SHELL PENETRATIONS A MINIMUM OF 4" AWAY FROM SHELL SEAM WELD.

3.



SECTION AK-AK

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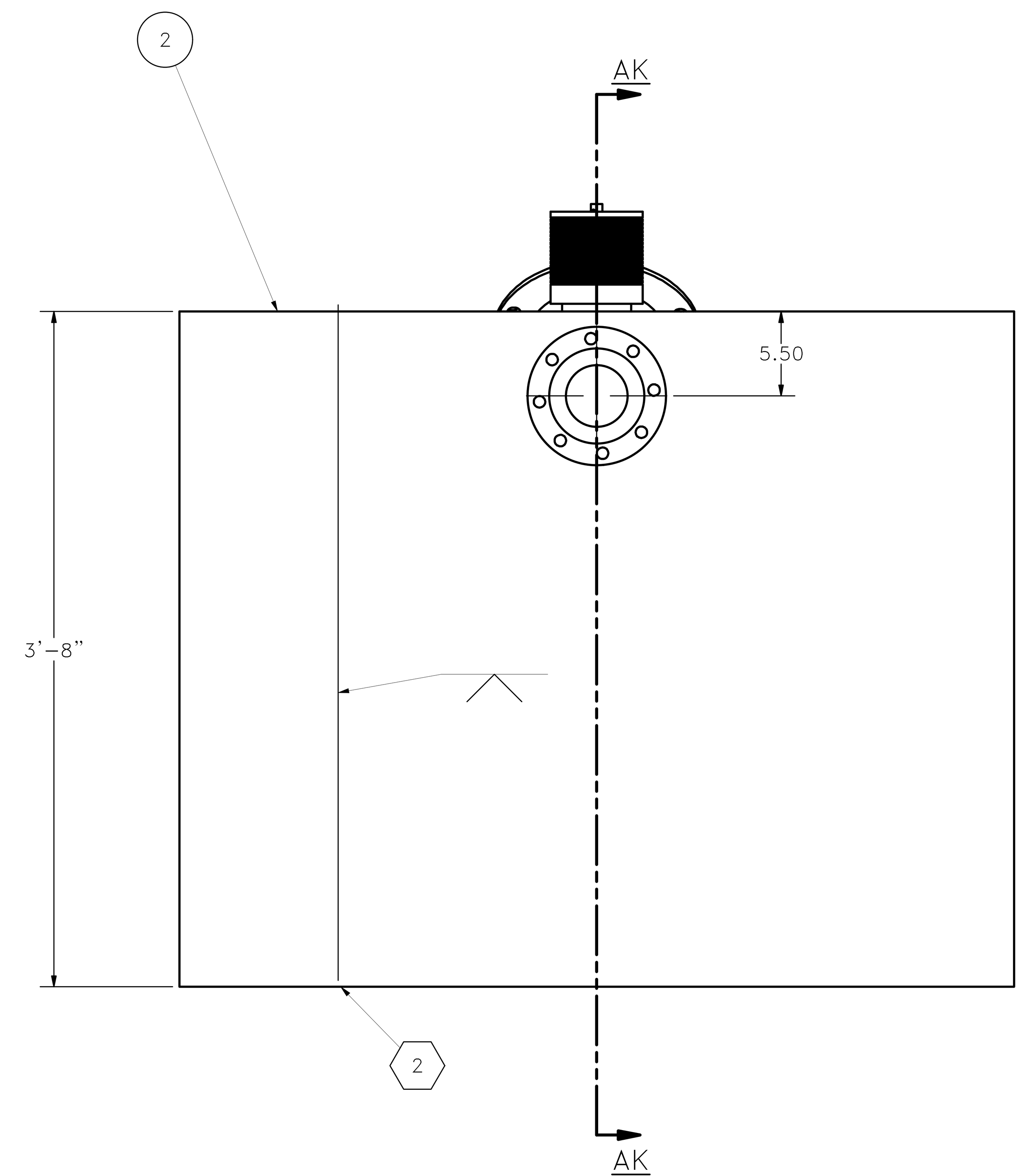

① SHELL WELDMENT

QTY	ITE	PART NUMBER	DESCRIPTION	MANUFACTUR	SPEC	MATERIAL
1	39	Manway_Cover				Generic
1	38	Manway_Flange				Generic
1	10	20121604-10	8" NPS, 150# BACKING FLANGE, ALASKAN COPPER, P/N SK-39-P-8-T316, UNS S31600		ASME B16.5	UNS S31600
1	9	20121604-9	4" NPS, 150# BACKING FLANGE, ALASKAN COPPER, P/N SK-39-P-4-T316, UNS S31600		ASME B16.5	UNS S31600
1	8	20121604-8	STUB END, 4" NPS SCHEDULE 40, 3" LENGTH		ASME B16.9, ASTM A790	UNS S32205
1	7	20121604-7	PIPE, Ø8" X 10.66", SCH.40, CUT AS SHOWN, DUPLEX 2205, ASTM A790		ASTM A790	UNS S32205
1	6	20121604-6	STUB END, Ø8" PIPE X 4.00" LG., SCH. 40, DUPLEX 2205, ASTM A815, ASME B16.9		ASME B16.9	UNS S32205
2	5	20121604-5	PLATE, 0.25" X 2.50" X 23.25", BEND ALONG CENTERLINE WITH INTERNAL RADIUS OF .85"		ASTM A240	UNS S32205
1	4	20121604-4	PLATE, 0.19" X 3.00" X 7.04", BEND AND CLIP AS SHOWN		ASTM A240	UNS S32205
1	3	20121607-1	INLET ASSEMBLY	TACOM (19207)		
1	2	20121604-2	SHELL, PLATE, 0.188" X 169.646" X 44.000", DUPLEX 2205, ASTM A240, ROLL AS SHOWN		ASTM A240	UNS S32205
	1	20121604-1	SHELL WELDMENT			

PARTS LIST

PART DASH NO.	NEXT ASSY.
-1	20121603-1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN FEET AND/OR INCHES

TOLERANCES:	
.X DECIMALS	±.03
.XX DECIMALS	±.01
.XXX DECIMALS	±.005
FRACTIONS	±1/8
ANGLES	±1°

PROJ NO.

NFESC DWG. NO. 20161604

DES. DRAWN

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SATISFACTORY TO

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COMMANDING OFFICER

APPROVED PLUTO DATE

FOR COMMANDER, NAVFAC

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND

NAVAL FACILITIES ENGINEERING SERVICE CENTER

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3K TWPS

MEDIA FILTER

SHELL WELDMENT

SIZE F CODE IDENT NO 80091 NAVFAC DRAWING NO.

CONSTRUCTION CONTRACT NO.

SCALE NONE SPEC NONE SHEET 4 OF 10

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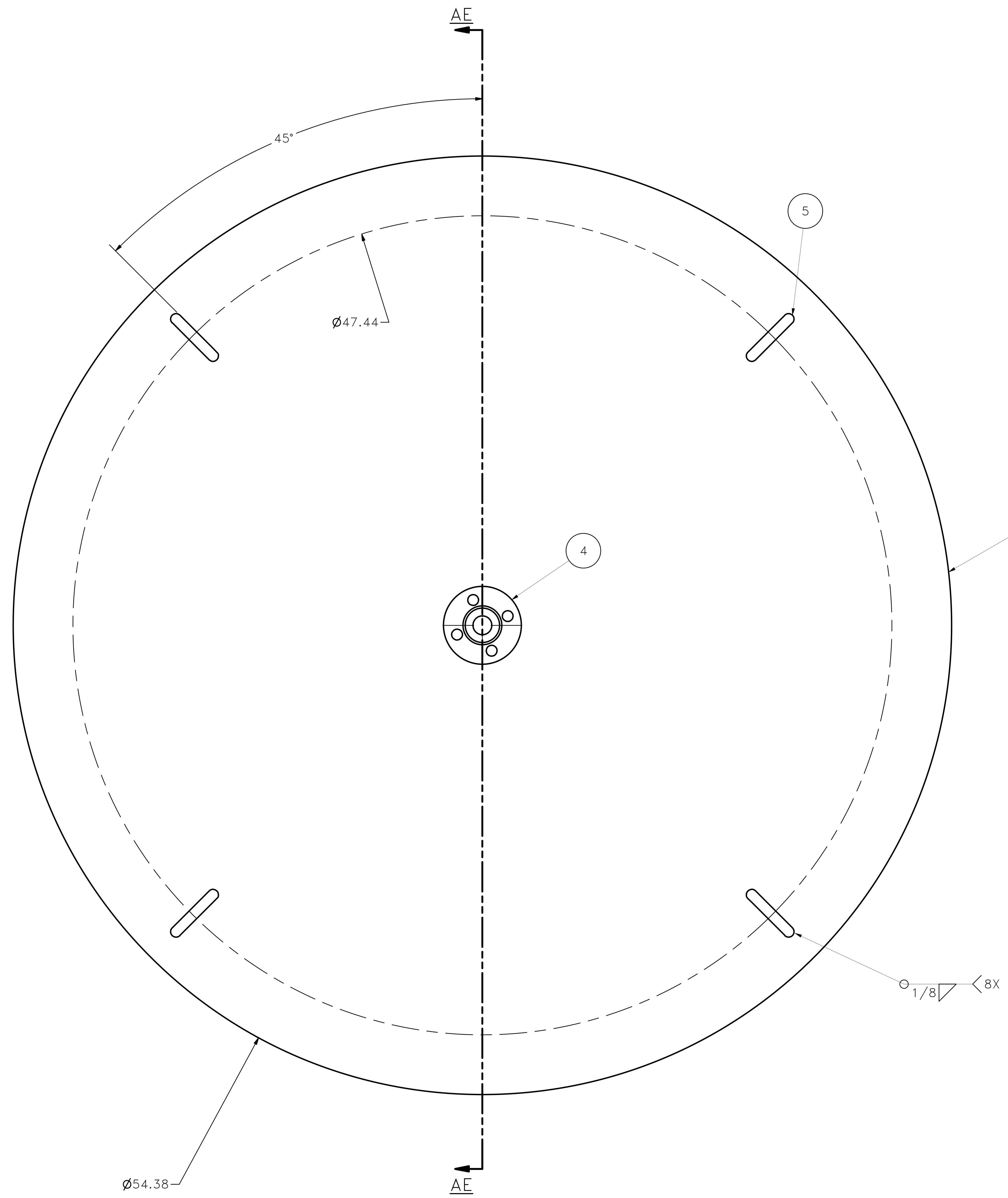
J2011-39

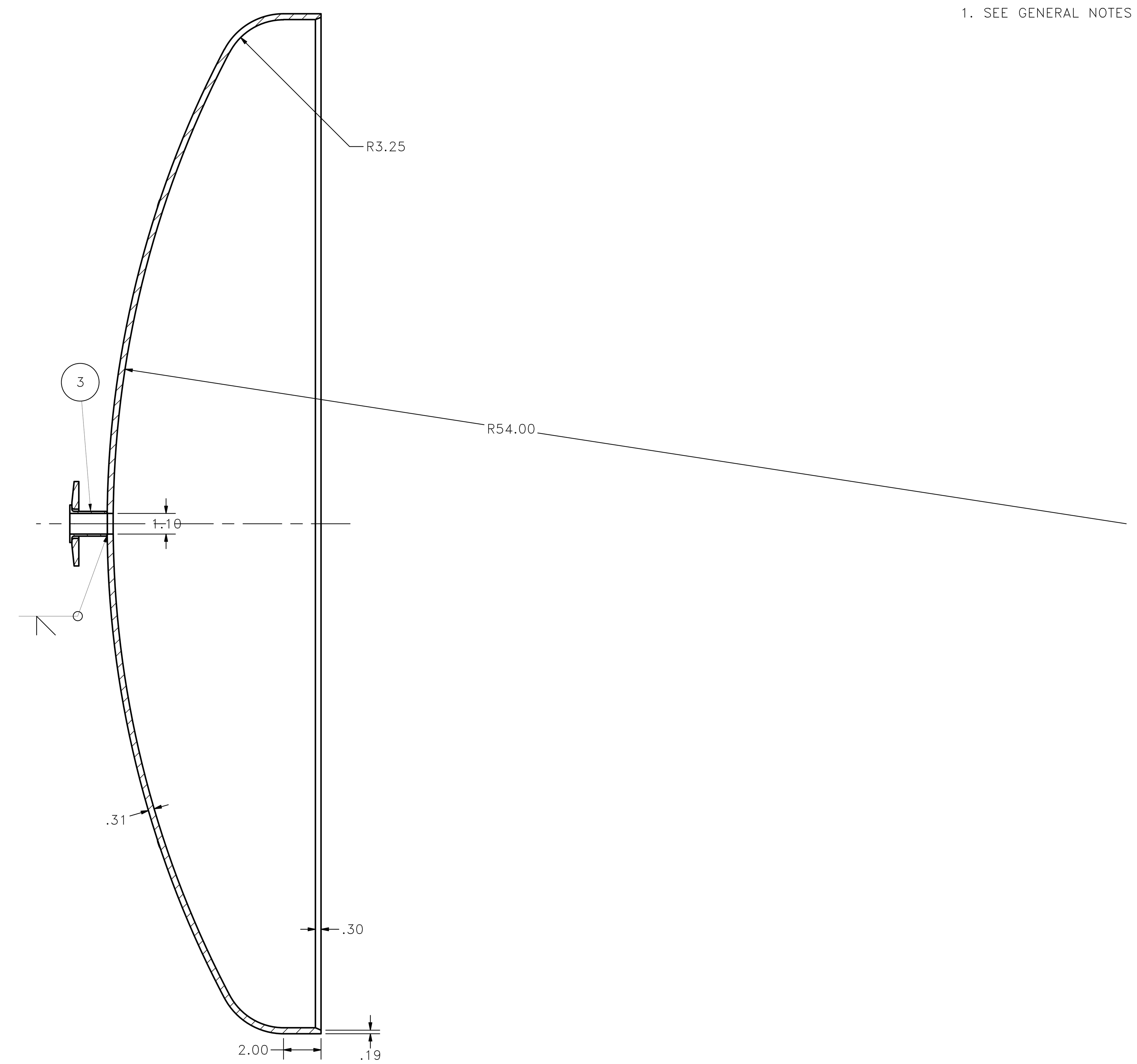
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL

NOTES

1. SEE GENERAL NOTES ON SHEET 20121601.

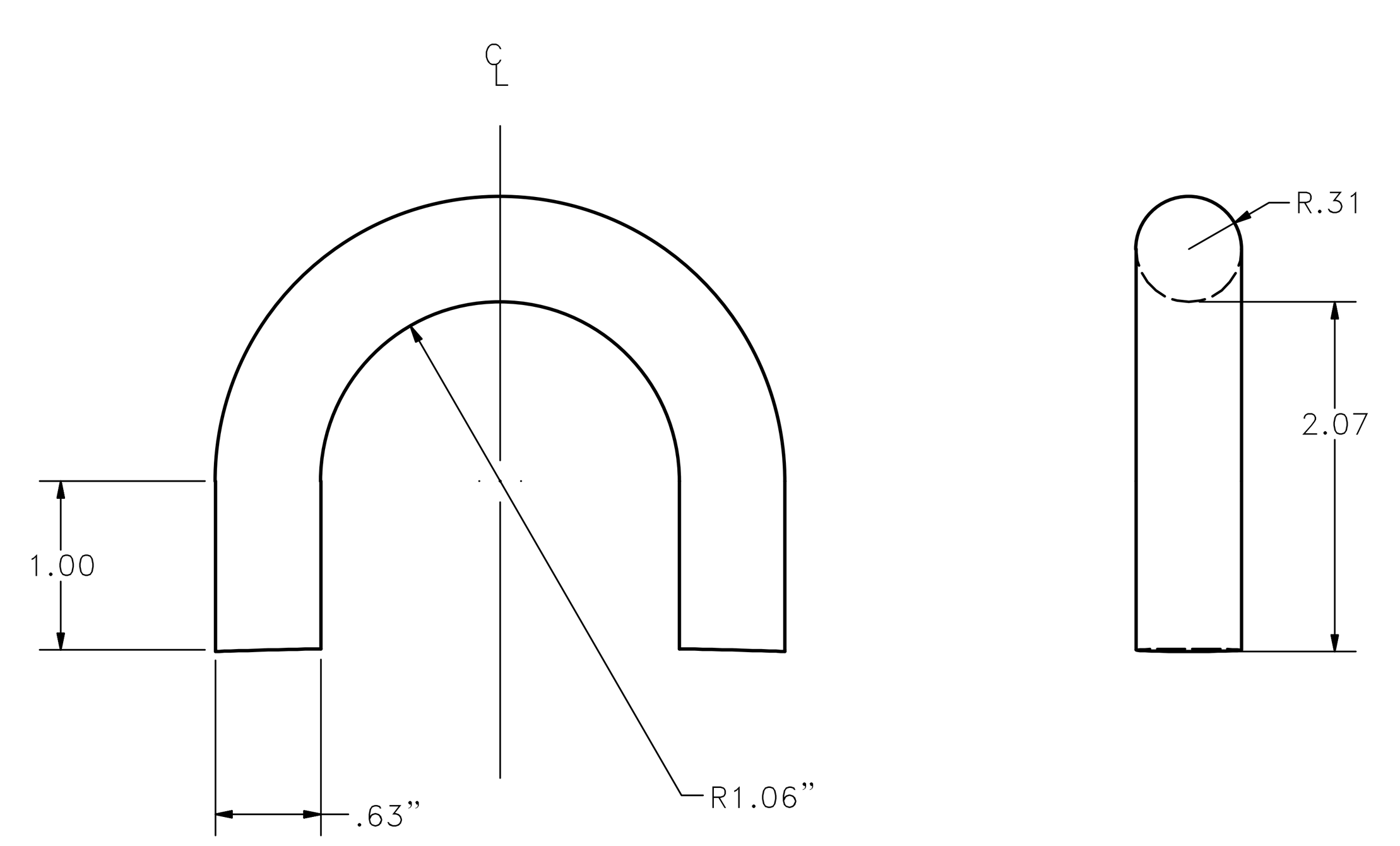


① HEAD, TOP, WELDMENT



SECTION AE–AE

SCALE 1 / 4



⑤ TIE–DOWN RING

QTY	ITE	PART NUMBER	DESCRIPTION	MANUFACTUR	SPEC	MATERIAL
4	5	20121605–5	TIE–DOWN RING, BAR Ø0.625" X 6.45" LG., 316 SST, BEND AS SHOWN			UNS S31603
1	4	20121605–4	1" NPS, 150# BACKING FLANGE, ALASKAN COPPER, P/N SK–39–P–1–T316, UNS S31600		ASME B16.5	UNS S31600
1	3	20121605–3	1" NPS SCHEDULE 10 STUB END		ASME B16.9	UNS S32205
1	2	20121605–2	HEAD, TORISPHERICAL			UNS S32205
	1	20121605–1	HEAD, TOP, WELDMENT			

PARTS LIST

–1	20121603–1
PART DASH NO.	NEXT ASSY.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN FEET AND/OR INCHES

TOLERANCES:	
.X DECIMALS	±.03
.XX DECIMALS	±.01
.XXX DECIMALS	±.005
FRACTIONS	±1/8
ANGLES	±1°

PROJ NO.
NFESC DWG. NO. 20161605
DES. DRAWN
CHECKED PDQ
BRANCH HEAD KIT MACK
DIV DIR W. TAUSIG
SATISFACTORY TO
APPROVED GOOFY DATE
COMMANDING OFFICER
APPROVED PLUTO DATE
FOR COMMANDER, NAVFAC

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND

NAVAL FACILITIES ENGINEERING SERVICE CENTER

PORT HUENEME, CALIFORNIA 93043

3K TWPS

MEDIA FILTER

HEAD, TOP, WELDMENT

SIZE F CODE IDENT NO 80091 NAVFAC DRAWING NO.

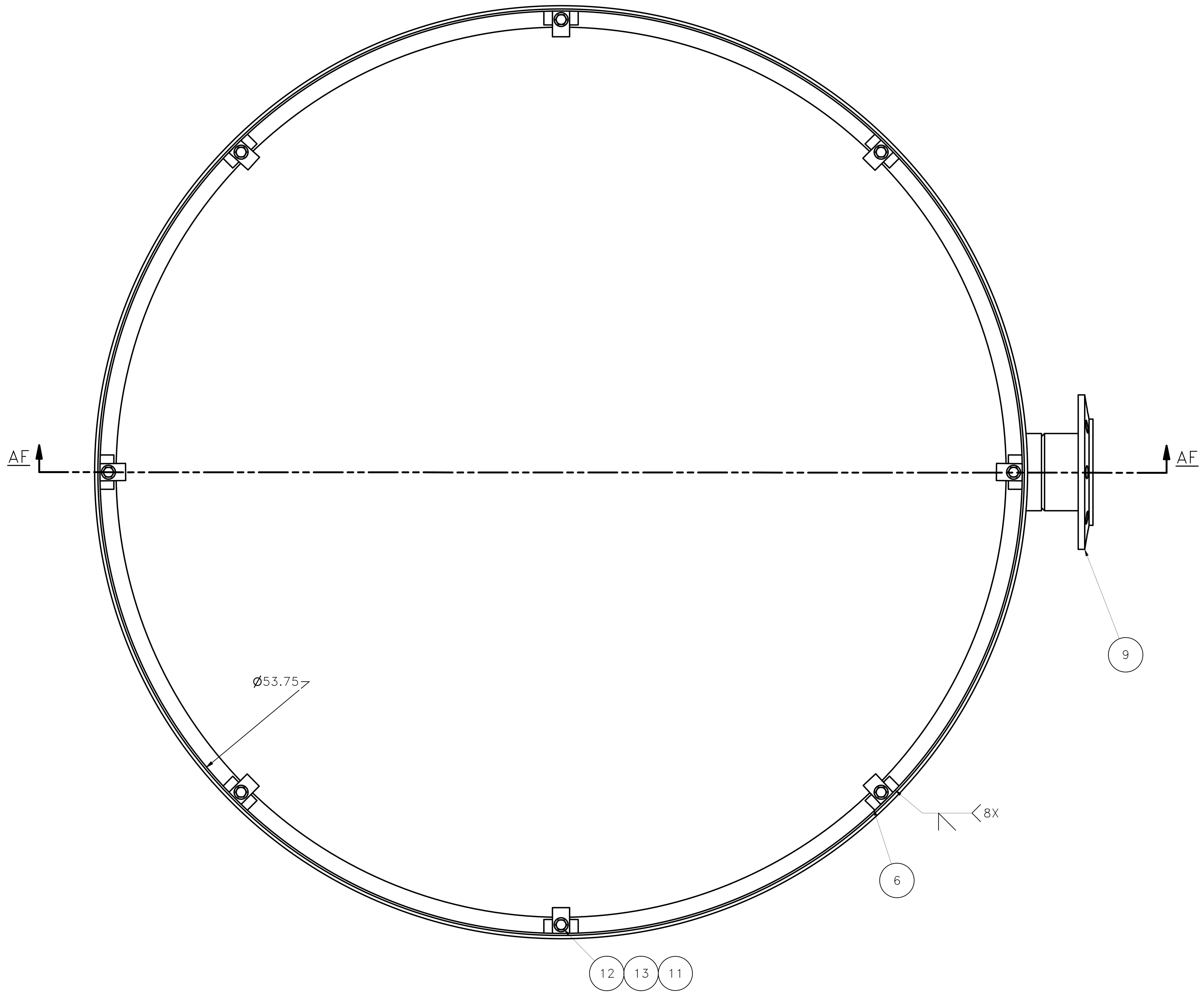
CONSTRUCTION CONTRACT NO.

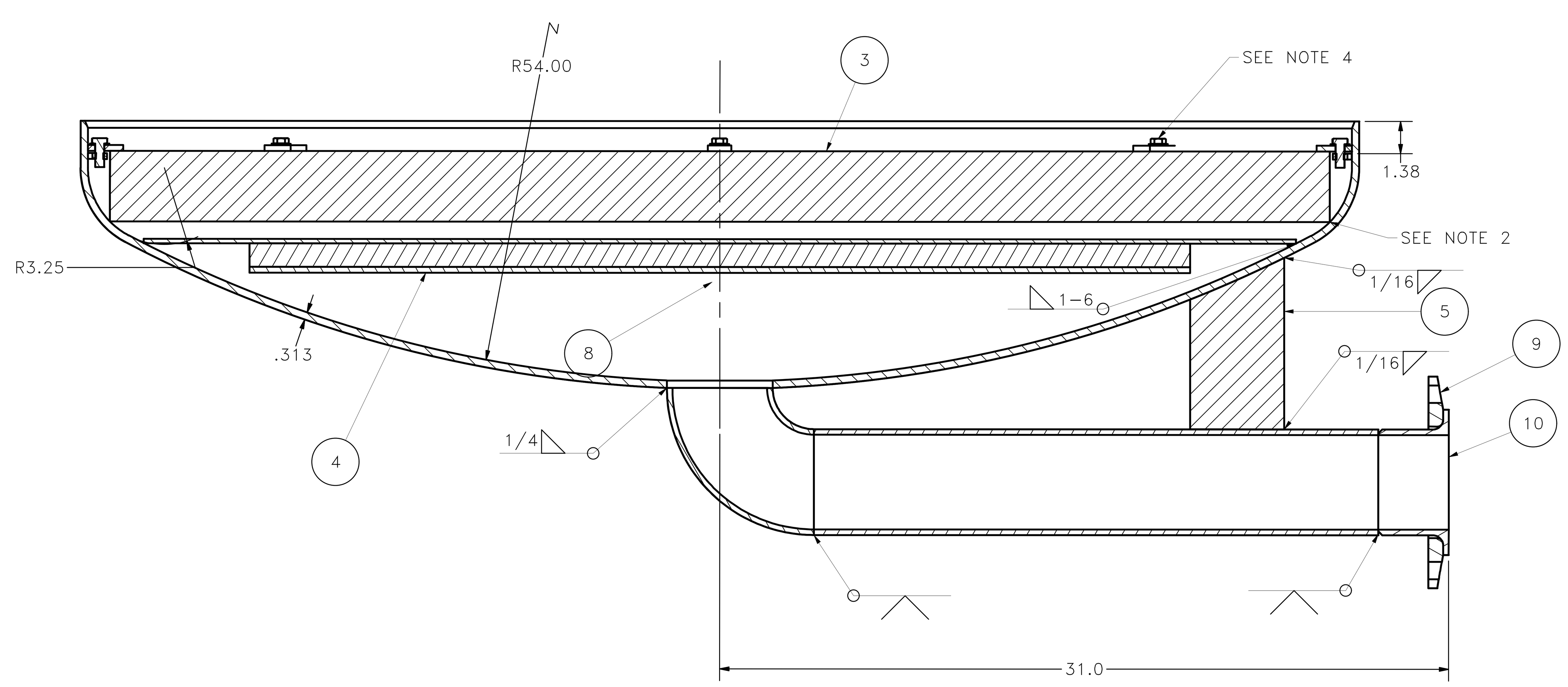
SCALE NONE SPEC NONE SHEET 5 OF 10

IF IN DOUBT, ASK – DO NOT SCALE

J2011–39

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL

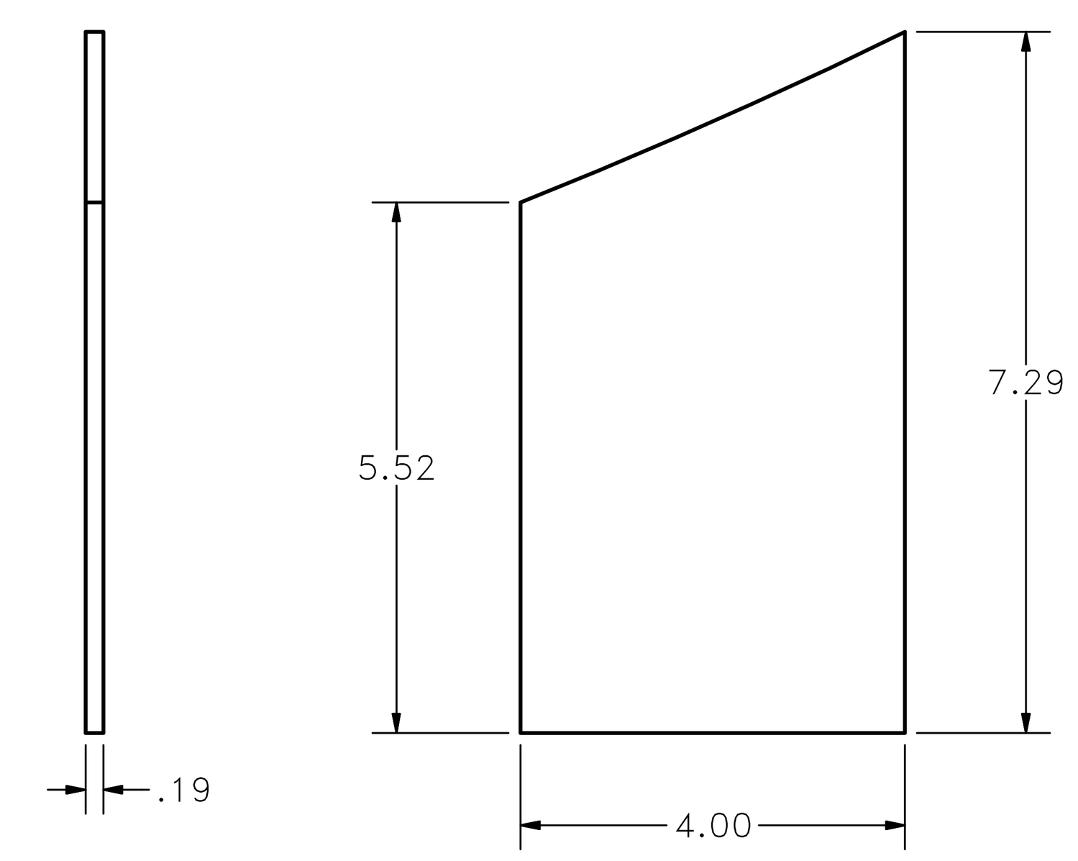




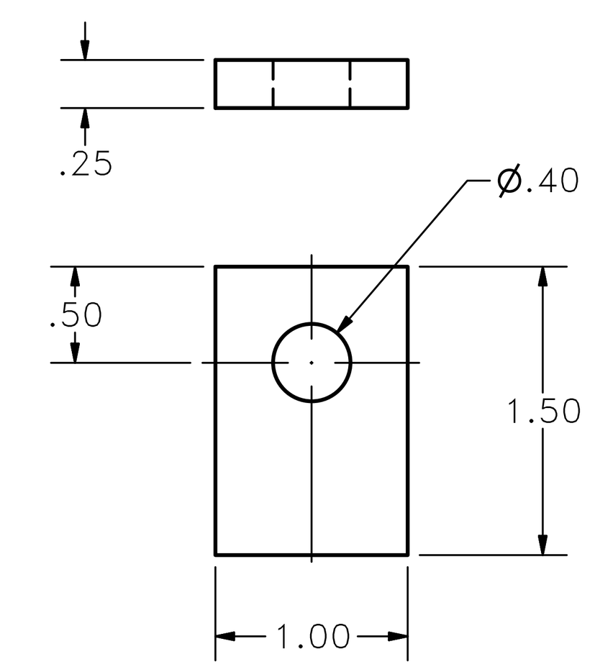
SECTION AF–AF

SCALE 1 / 4

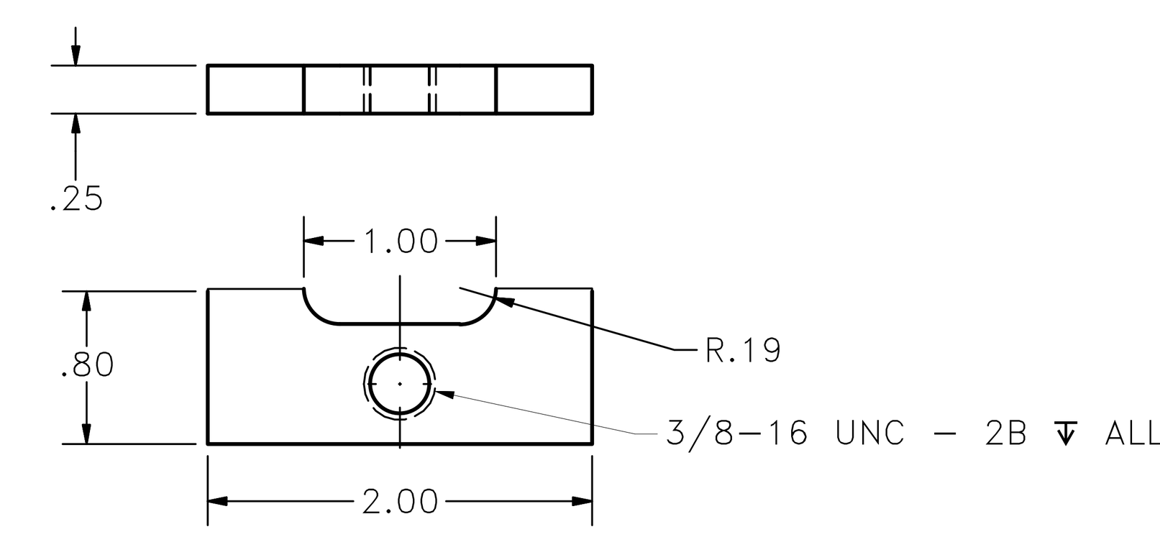
① HEAD, BOTTOM, WELDMENT



⑦ PLATE



⑪ GRID RETAINER



⑥ PLATE

NOTES

1. SEE GENERAL NOTES ON SHEET 20161601.
2. CHECK GAP BETWEEN GRID SUPPORT AND THE HEAD WALL GAP SHALL BE LESS THAN .039 IN (1MM).
3. A THORUGH INSPECTION OF THE MEDIA SUPPORT GRID SHOULD BE PERFORMED BEFORE AND AFTER FABRICATION OF THE FILTER PRESSURE VESSEL. THE MEDIA SUPPORT GRID CONTAINS PRECISELY SLOTTED OPENINGS THAT ARE USED TO RETAIN 0.30 TO 0.40 MM SAND (0.012 TO 0.016 IN). FABRICATION PROCESSES AND WELDING PROCEDURES SHALL NOT AFFECT THE SLOT OPENINGS. BYPASS OF THE MEDIA DOWNSTREAM IS EXTREMELY DETRIMENTAL TO PUMPS, VALVES AND OTHER PROCESS COMPONENTS.
4. TORQUE BOLTS TO 21.5 FT–LB. WITH LOCTITE 268 RED

QTY	ITE	PART NUMBER	DESCRIPTION	MANUFACTUR	SPEC	MATERIAL
8	13	20161606–13	3/8 SAE WASHER			UNS S32750
8	12	20161605–12	3/8–16 UNC X 1 HEX HEAD BOLT		NASM 35307	UNS S32750
8	11	20161606–11	GRID RETAINER			UNS S32750
1	10	20121604–8	STUB END, 4" NPS SCHEDULE 40, 3" LENGTH		ASME B16.9, ASTM A790	UNS S32205
1	9	20121604–9	4" NPS, 150# BACKING FLANGE, ALASKAN COPPER, P/N SK–39–P–4–T316, UNS S31600		ASME B16.5	UNS S31600
1	8	20121606–9	4" NPS SCHEDULE 40 SHORT ELBOW		ASME B16.9	UNS S32205
1	7	20121609–8	4" NPS SCHEDULE 40 X 24" LENGTH		ASTM A790	UNS S32205
8	6	20121606–6	PLATE, 0.19" X 1.50" X 2.00", CUT RADIUS AS SHOWN		ASTM A240	UNS S32750
1	5	20113905–7	PLATE, 0.19" X 4.00" X 7.50", CUT TO CONTOUR AS SHOWN		ASTM A276	UNS S31600
1	4	20121608–2	DIFFUSER PLATE WELDMENT		ASTM A240	
1	3	20121608–1	MEDIA BED FILTER GRID, DIA. 51–7/8" O.D., #90 VEE–WIRE SLOT, SLOT SIZE 0.005" +/– 0.002", DUPLEX 2205			UNS S32205
1	2	20121606–2	HEAD, TORISPHERICAL			UNS S32205
	1	20121606–1	HEAD, BOTTOM, WELDMENT			

PARTS LIST

PART DASH NO.	NEXT ASSY.
–1	20121603–1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN FEET AND/OR INCHES

TOLERANCES:	
.X DECIMALS	±.03
.XX DECIMALS	±.01
.XXX DECIMALS	±.005
FRACTIONS	±1/8
ANGLES	±1°

PROJ NO.
NFESC DWG. NO. 20161606
DES. DRAWN
CHECKED PDQ
BRANCH HEAD KIT MACK
DIV DIR W. TAUSIG
SATISFACTORY TO
APPROVED GOOFY DATE
COMMANDING OFFICER
APPROVED PLUTO DATE
FOR COMMANDER, NAVFAC

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NAVAL FACILITIES ENGINEERING SERVICE CENTER
PORT HUENEME, CALIFORNIA 93043

3K TWPS
MEDIA FILTER
HEAD, BOTTOM, WELDMENT

SIZE F CODE IDENT NO 80091 NAVFAC DRAWING NO.
CONSTRUCTION CONTRACT NO.
SCALE NONE SPEC NONE SHEET 6 OF 10

IF IN DOUBT, ASK – DO NOT SCALE

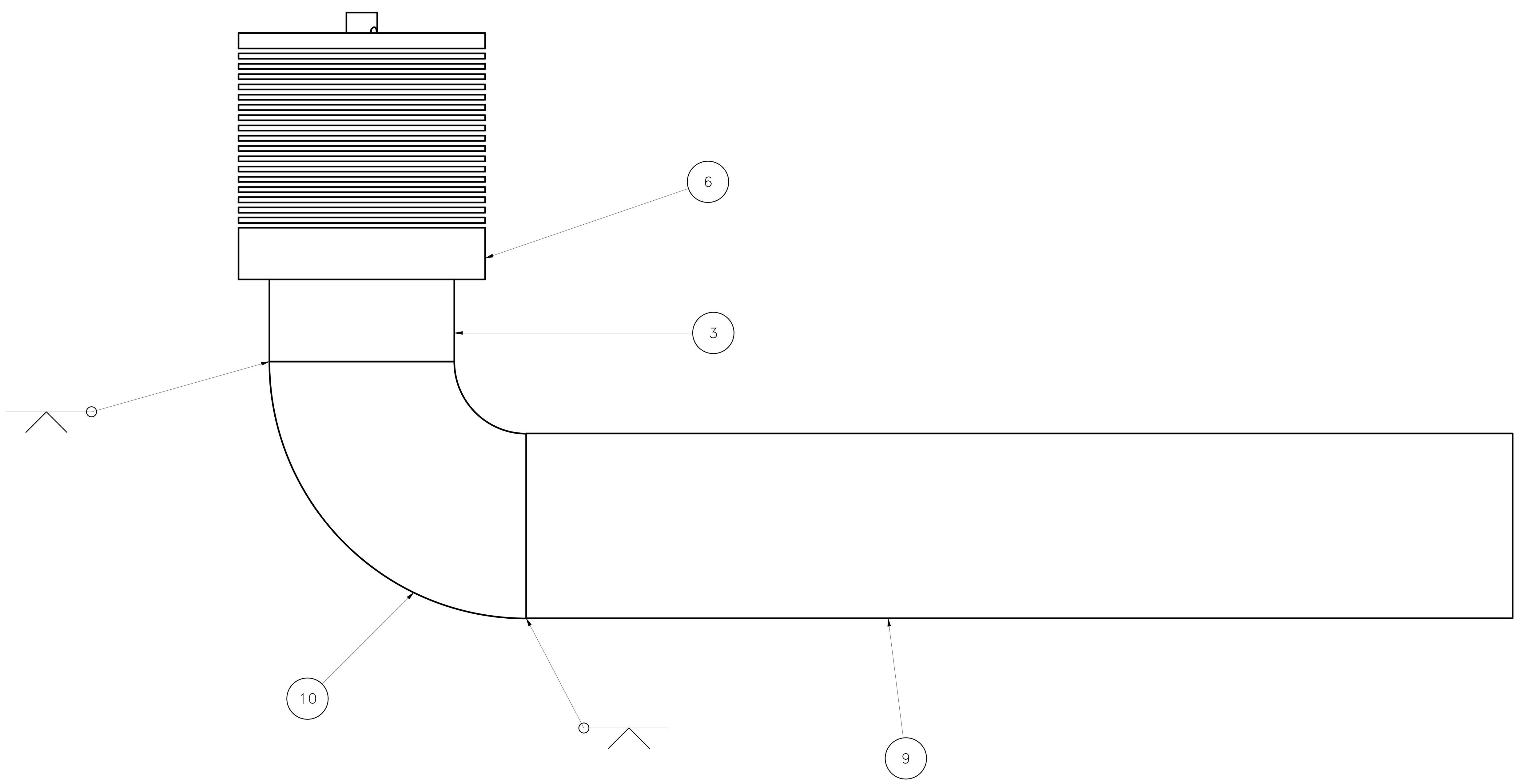
J2011–39

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL

NOTES

1. SEE GENERAL NOTES ON SHEET 20121601.

2. FOR THREADED CONNECTIONS, USE NSF 61 CERTIFIED NON–SETTING PIPE SEALING COMPOUND. A SUGGESTED PRODUCT IS RECTORSEAL T PLUS 2.



① INLET PIPE WELDMENT

QTY	ITE	PART NUMBER	DESCRIPTION	MANUFACTUR	SPEC	MATERIAL
1	10	20121606–9	4" NPS SCHEDULE 40 SHORT ELBOW		ASME B16.9	UNS S32205
1	9	20121609–8	4" NPS SCHEDULE 40 X 24" LENGTH		ASTM A790	UNS S32205
1	6	20120110	INLET SCREEN			
1	3	20121607–3	4" NPS SCHEDULE 40 PIPE X 3" LONG, THREADED ONE END		ASTM A790	UNS S32205
	1	20121607–1	INLET PIPE WELDMENT			

PARTS LIST

PART DASH NO.	NEXT ASSY.
–1	20121604–1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN FEET AND/OR INCHES

TOLERANCES:	
.X DECIMALS	±.03
.XX DECIMALS	±.01
.XXX DECIMALS	±.005
FRACTIONS	±1/8
ANGLES	±1°

PROJ NO.
NFESC DWG. NO. 20161607
DES. DRAWN
CHECKED PDQ
BRANCH HEAD KIT MACK
DIV DIR W. TAUSIG
SATISFACTORY TO
APPROVED GOOFY DATE
COMMANDING OFFICER
APPROVED PLUTO DATE
FOR COMMANDER, NAVFAC

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING SERVICE CENTER
PORT HUENEME, CALIFORNIA 93043

3K TWPS
MEDIA FILTER
INLET PIPE WELDMENT

SIZE F | CODE IDENT NO 80091 | NAVFAC DRAWING NO.
CONSTRUCTION CONTRACT NO.
SCALE NONE | SPEC NONE | SHEET 7 OF 10

IF IN DOUBT, ASK – DO NOT SCALE

J2011–39

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL

NOTES

1. SEE GENERAL NOTES ON SHEET 20121601.

2. MEDIA BED FILTER GRID ASSEMBLY SPECIFICATIONS:
   - ALL MATERIAL DUPLEX STAINLESS STEEL 2507 (UNS S32750).
   - MEDIA BED FILTER GRID DIAMETER: 51-7/8" O.D.
   - SLOT SHAPE: #90VEE-WIRE (WEDGE WIRE)
     SLOT SIZE: 0.005" ±0.002"
   - PERIMETER BAND: 2" HIGH X 1/4" THICK
   - SINGLE PIECE CONSTRUCTION
   - BEARING SUPPORT STRENGTH SHOULD BE SIZED FOR 12 PSI (GRID SHOULD SUPPORT 12 PSI PRESSURE ON ITS OWN, NO MID BEAM SUPPORT WILL BE PROVIDED)

3. MEDIA BED FILTER GRID ASSEMBLY SUGGESTED VENDORS;

   HENDRICK SCREEN COMPANY
   OWENSBORO, KY
   MR. WILLIAM FLOWERS
   (270) 685-5138
   willie.flowers@hendrickscreenco.com
   www.hendrickscreenco.com

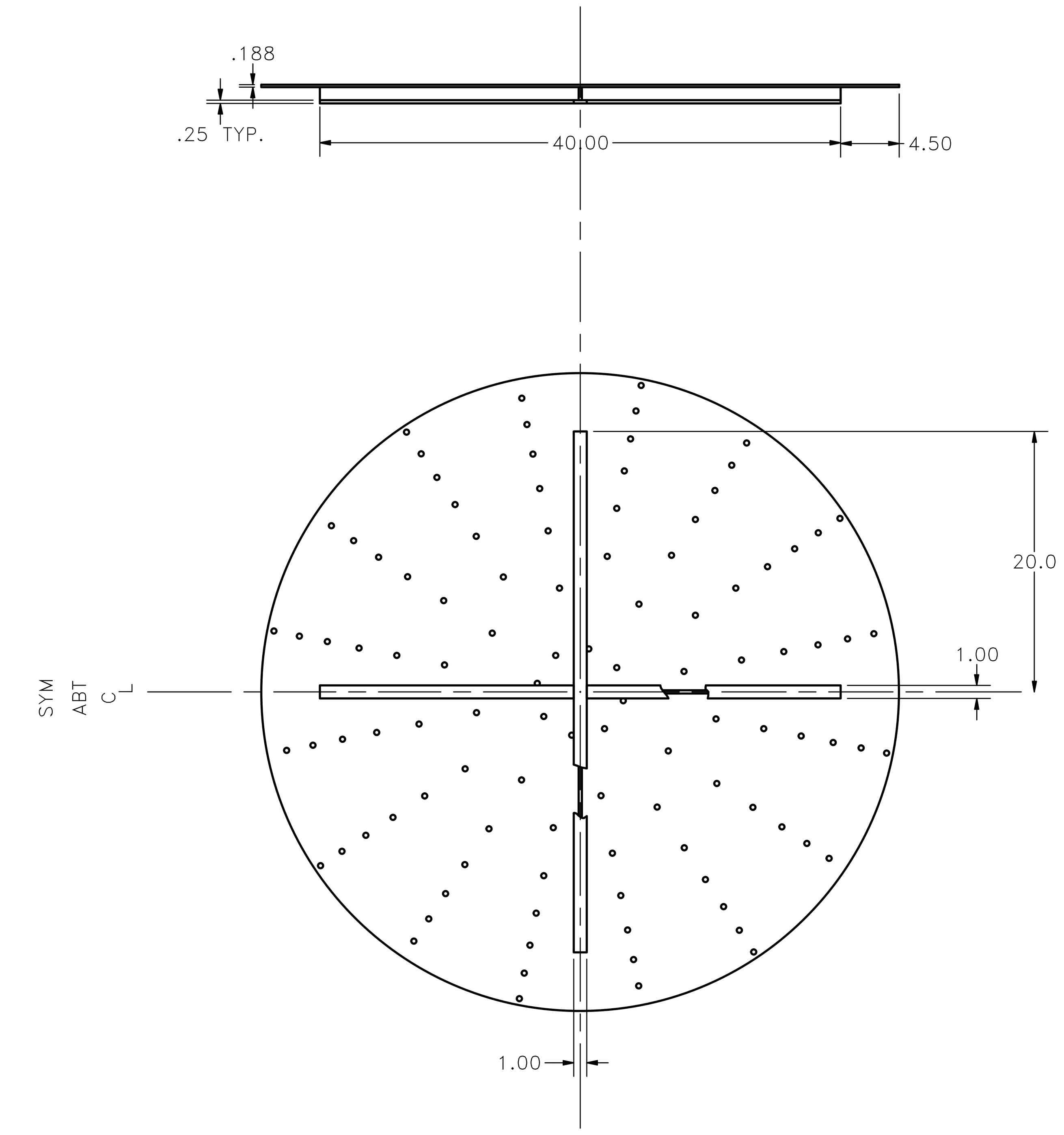
   FEDERAL SCREEN PRODUCTS INC.
   MR. GREG COLEMAN
   (905) 677-4171
   greg@federalscreen.com
   www.federalscreen.com

   CONCORD SCREEN INC.
   MS. LORRAINE WALL
   (905) 953-8100
   lwall@concordscreen.com
   www.concordscreen.com

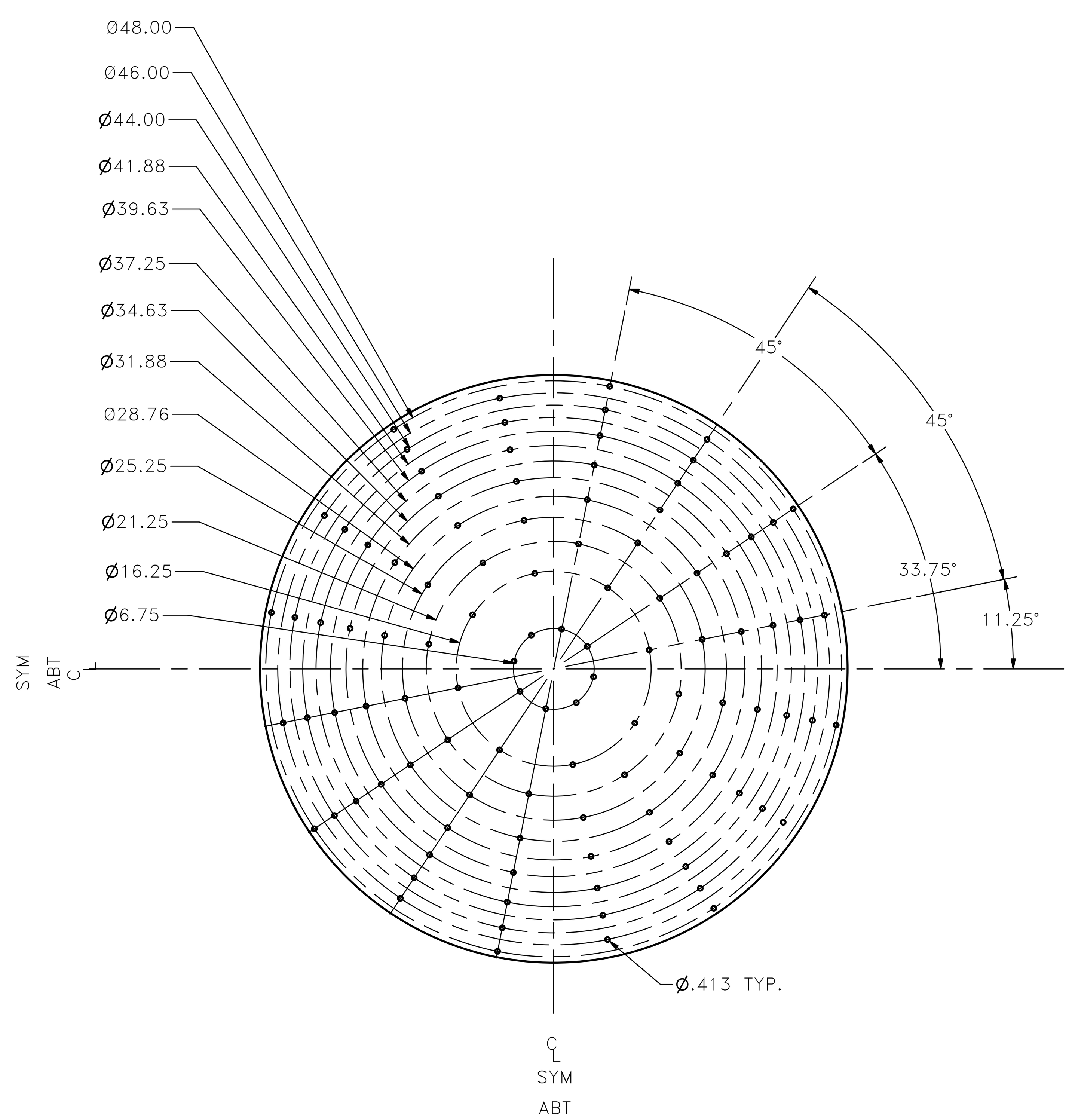
   JOHNSON SCREENS(R)
   NEW BRIGHTON, MN
   MS. MEGAN RANGER
   (651) 638-3192
   megan.ranger@bilfinger.com
   www.johnsonscreens.com

4. A THORUGH INSPECTION OF THE MEDIA SUPPORT GRID SHOULD BE PERFORMED BEFORE AND AFTER FABRICATION OF THE FILTER PRESSURE VESSEL. THE MEDIA SUPPORT GRID CONTAINS PRECISELY SLOTTED OPENINGS THAT ARE USED TO RETAIN 0.30 TO 0.40 MM SAND (0.012 TO 0.016 IN). FABRICATION PROCESSES AND WELDING PROCEDURES SHALL NOT AFFECT THE SLOT OPENINGS. BYPASS OF THE MEDIA DOWNSTREAM IS EXTREMELY DETRIMENTAL TO PUMPS, VALVES AND OTHER PROCESS COMPONENTS.

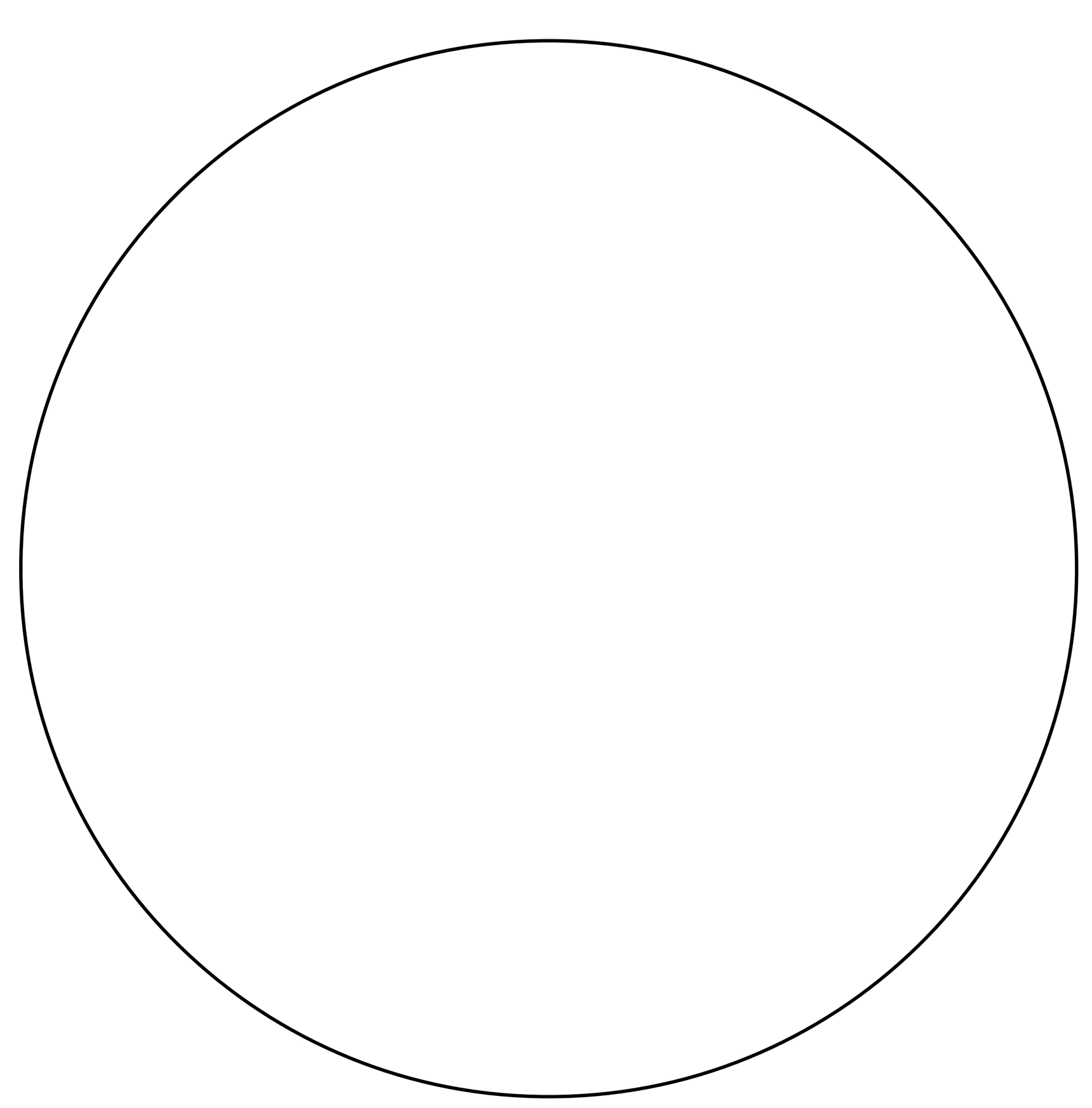
5. GOVERNMENT FURNISHED EQUIPMENT (GFE)



(2) DIFFUSER ASSEMBLY



(2) DIFFUSER PLATE



(6) MEDIA BED FILTER GRID ASSEMBLY

(2.) (3.) (5.)

QTY	ITE	PART NUMBER	DESCRIPTION	MANUFACTUR	SPEC	MATERIAL
1	2	20121608-2	DIFFUSER PLATE WELDMENT		ASTM A240	
1	1	20121608-1	MEDIA BED FILTER GRID, DIA. 51-7/8" O.D., #90 VEE-WIRE SLOT, SLOT SIZE 0.005" +/- 0.002", DUPLEX 2507			UNS S32750

PARTS LIST

PART DASH NO.	NEXT ASSY.
-2	20121606-1
-1	20121606-1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN FEET AND/OR INCHES

TOLERANCES:	
.X DECIMALS	±.03
.XX DECIMALS	±.01
.XXX DECIMALS	±.005
FRACTIONS	±1/8
ANGLES	±1°

PROJ NO.
NFESC DWG. NO. 20161608
DES. DRAWN
CHECKED PDQ
BRANCH HEAD KIT MACK
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COMMANDING OFFICER
APPROVED PLUTO DATE
FOR COMMANDER, NAVFAC

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING SERVICE CENTER
PORT HUENEME, CALIFORNIA 93043

3K TWPS
MEDIA FILTER
DIFFUSER & MEDIA BED

SIZE F | CODE IDENT NO 80091 | NAVFAC DRAWING NO.
CONSTRUCTION CONTRACT NO.
SCALE NONE | SPEC NONE | SHEET 8 OF 10

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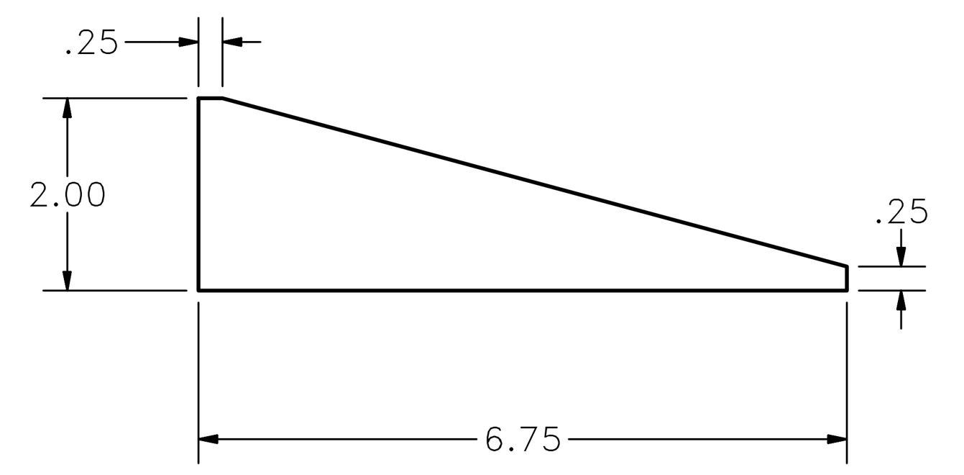
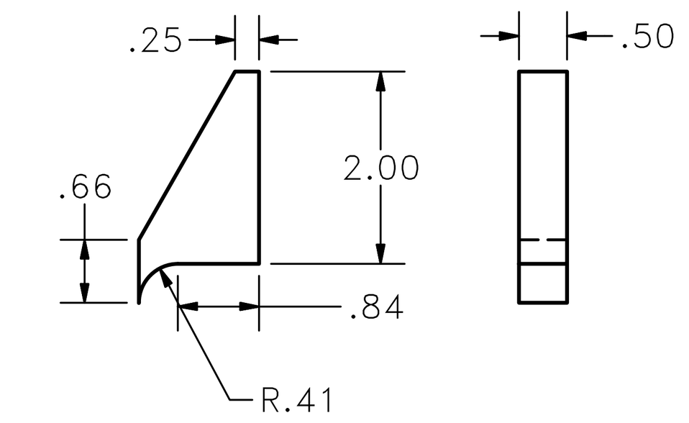
J2011-39

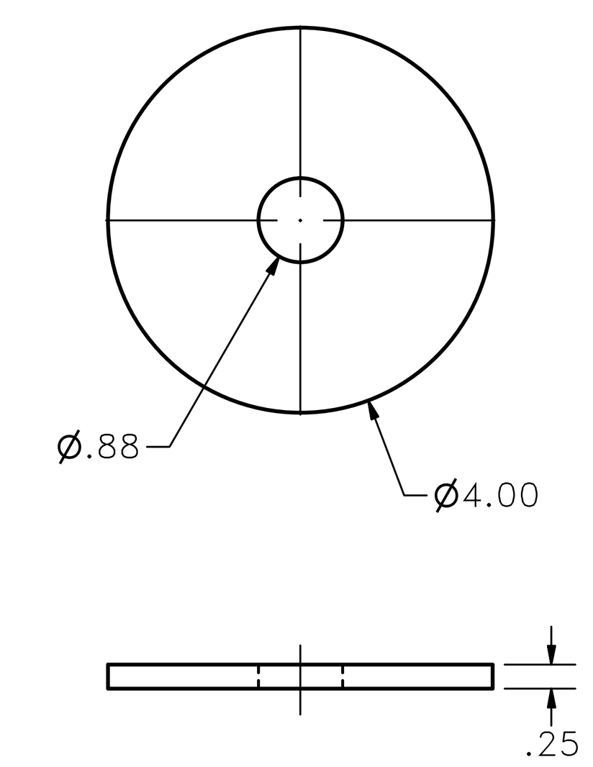
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL



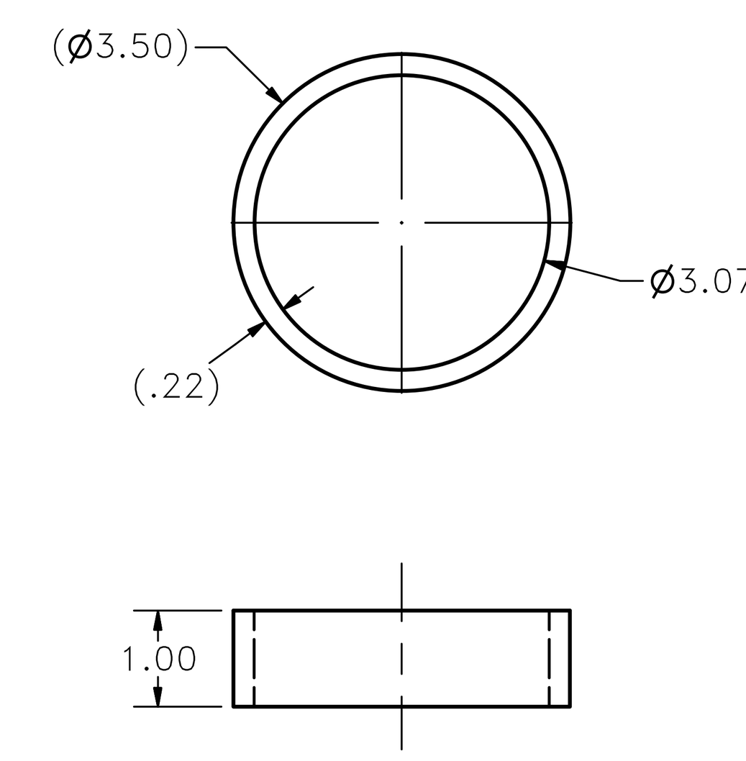
5 GUSSET PLATE



6 GUSSET PLATE



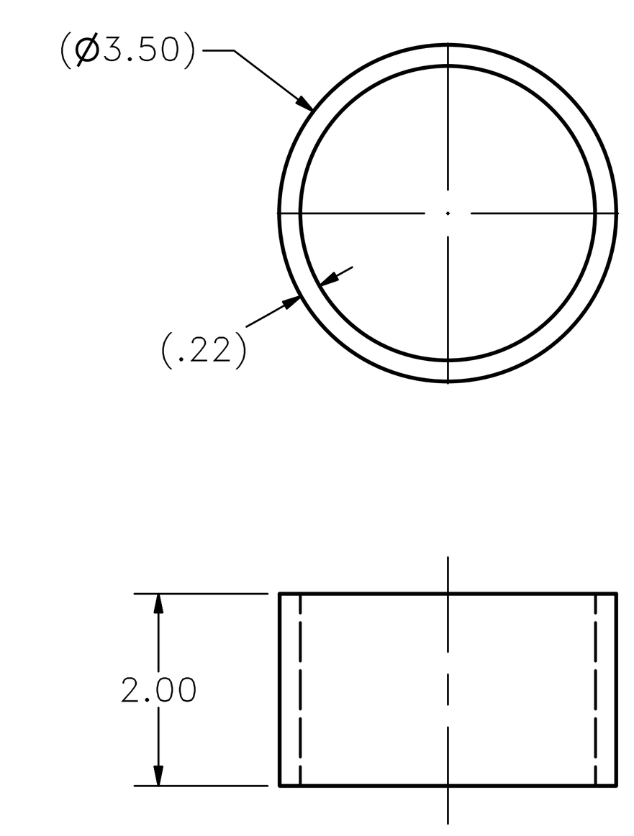
7 PLATE



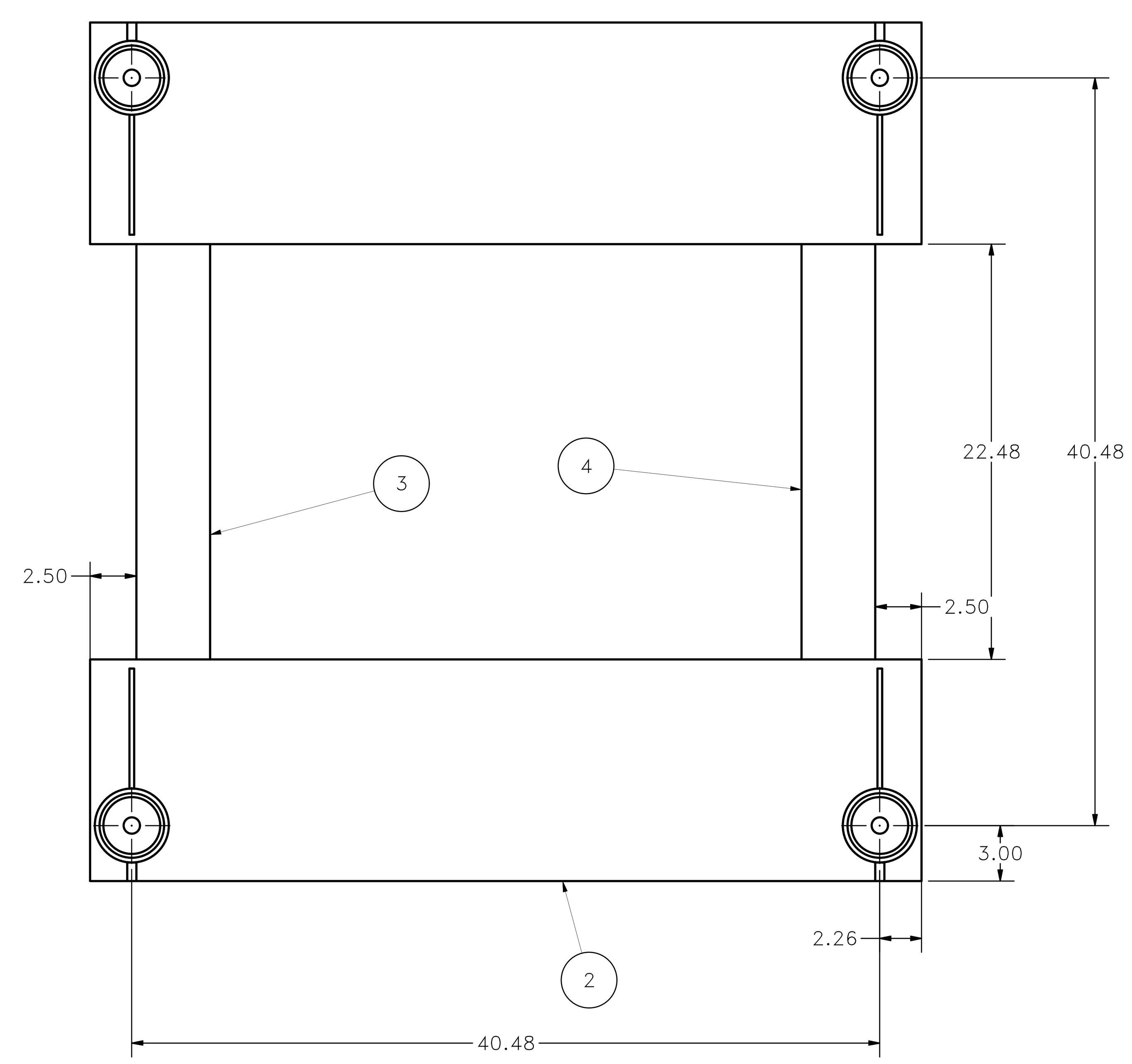
8 PIPE, TOP

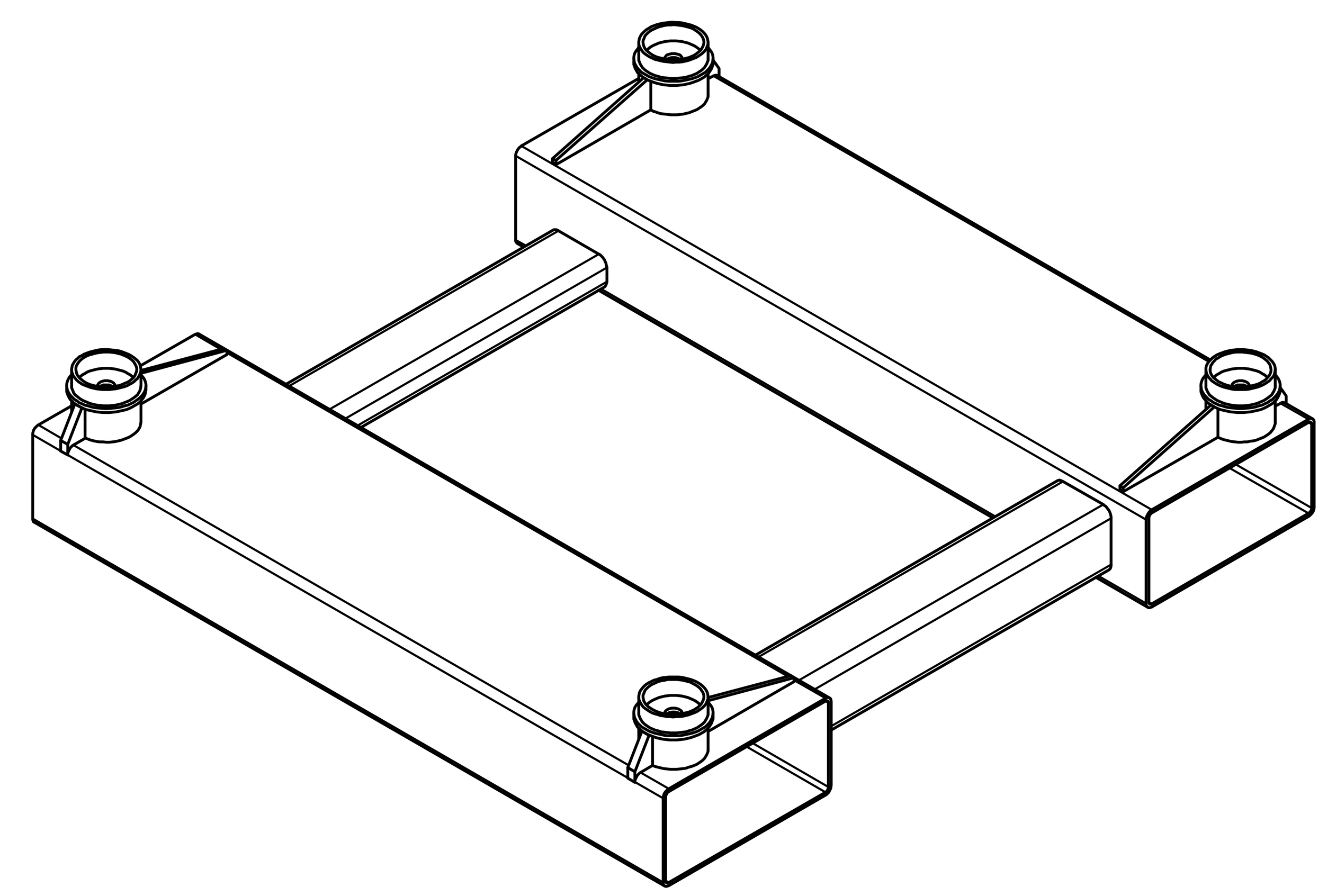
NOTES

1. SEE GENERAL NOTES ON SHEET 20121601.
2. 3/16 FILLET WELD ALL PIECES.
3. (△) HOLE CUT IN RECTANGULAR TUBING TO ALLOW INSTALLATION OF SHOCK MOUNT.

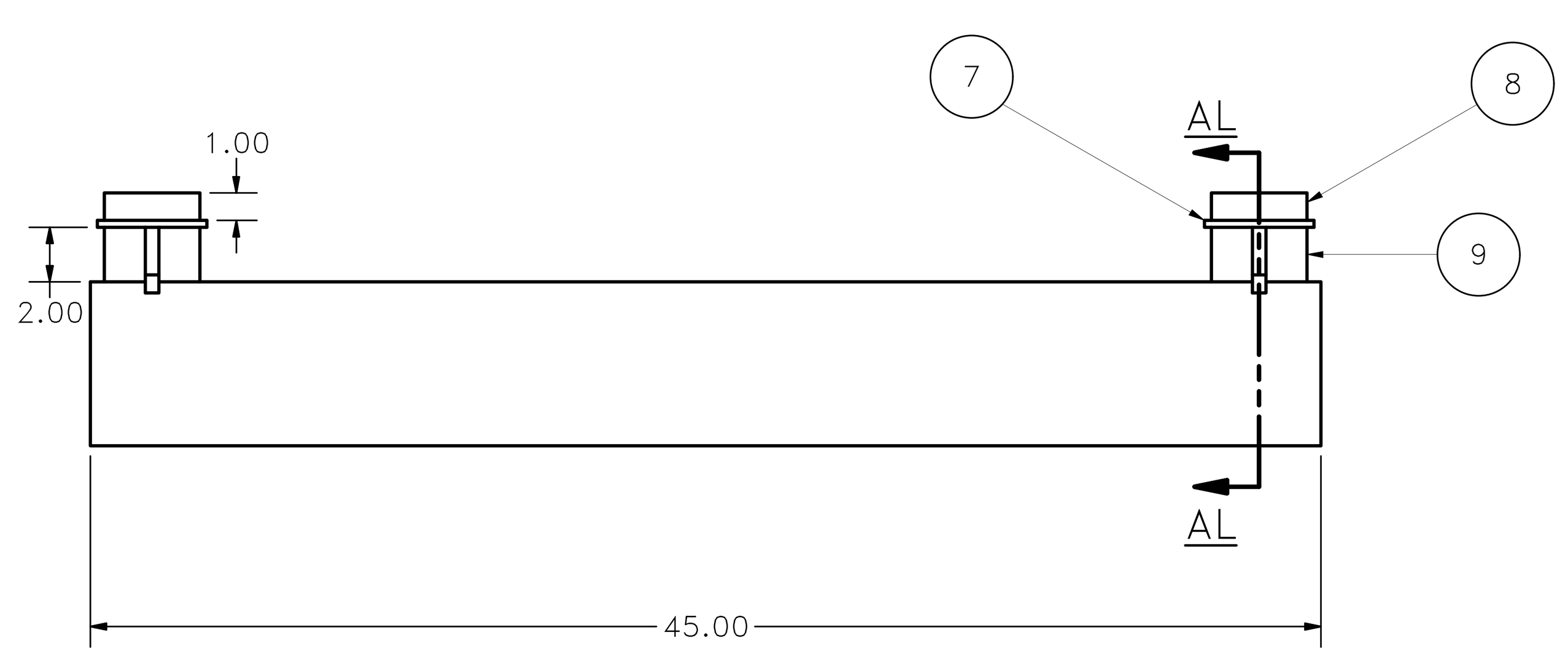


9 PIPE, BOTTOM

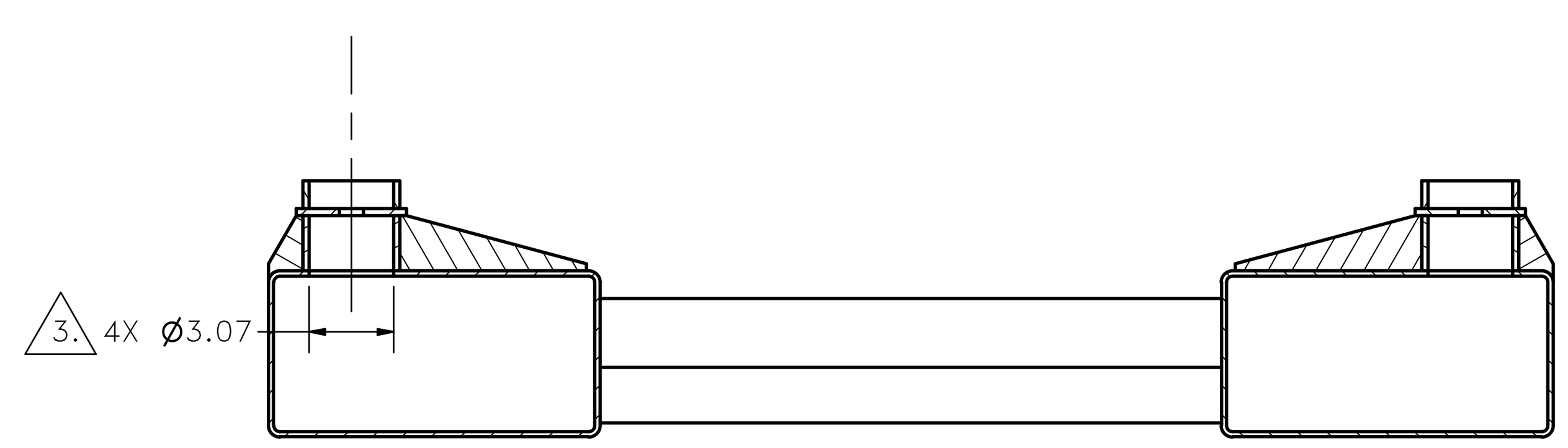




ISOMETRIC VIEW FOR REFERENCE ONLY



1 BASE



SECTION AL–AL
SCALE 1/6

4	9	20121609–9	3" NPS SCHEDULE 40		ASTM A312	UNS S31603
4	8	20121609–8	3" NPS SCHEDULE 40		ASTM A312	UNS S31603
4	7	20121609–7	1/4" PLATE		ASTM A666	UNS S31603
4	6	20121609–6	1/2" THICK PLATE		ASTM A666	UNS S31603
4	5	20121609–5	1/4" PLATE		ASTM A666	UNS S31603
1	4	20121609–4	4" X 2" X 1/4" WALL HSS		ASTM A276	UNS S31603
1	3	20121609–3	4" X 4" X 1/4" WALL HSS		ASTM A276	UNS S31603
2	2	20121609–2	12" X 6" X 3/16" WALL HSS		ASTM A276	UNS S31600
	1	20121609–1	BASE			
QTY	ITE	PART NUMBER	DESCRIPTION	MANUFACTUR	SPEC	MATERIAL

PARTS LIST

PART DASH NO.	NEXT ASSY.
–1	20121602–1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN FEET AND/OR INCHES

TOLERANCES:	
.X DECIMALS	±.03
.XX DECIMALS	±.01
.XXX DECIMALS	±.005
FRACTIONS	±1/8
ANGLES	±1°

PROJ NO.
NFESC DWG. NO. 20161609
DES. DRAWN
CHECKED PDQ
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COMMANDING OFFICER
APPROVED PLUTO DATE
FOR COMMANDER, NAVFAC

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NAVAL FACILITIES ENGINEERING SERVICE CENTER
PORT HUENEME, CALIFORNIA 93043

3K TWPS
MEDIA FILTER
BASE

SIZE F | CODE IDENT NO 80091 | NAVFAC DRAWING NO. | CONSTRUCTION CONTRACT NO.
SCALE NONE | SPEC NONE | SHEET 9 OF 10

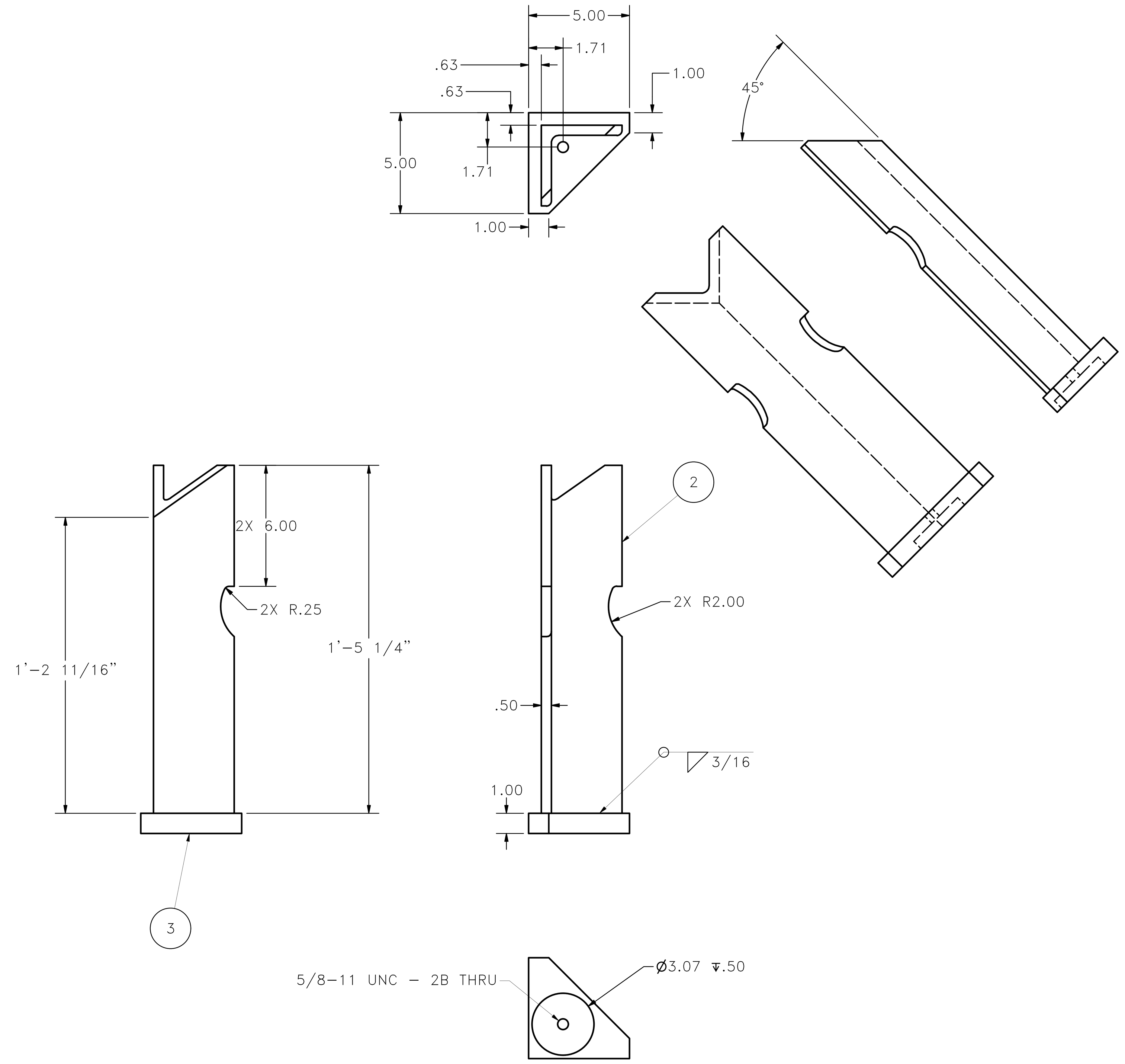
IF IN DOUBT, ASK – DO NOT SCALE

J2011–39

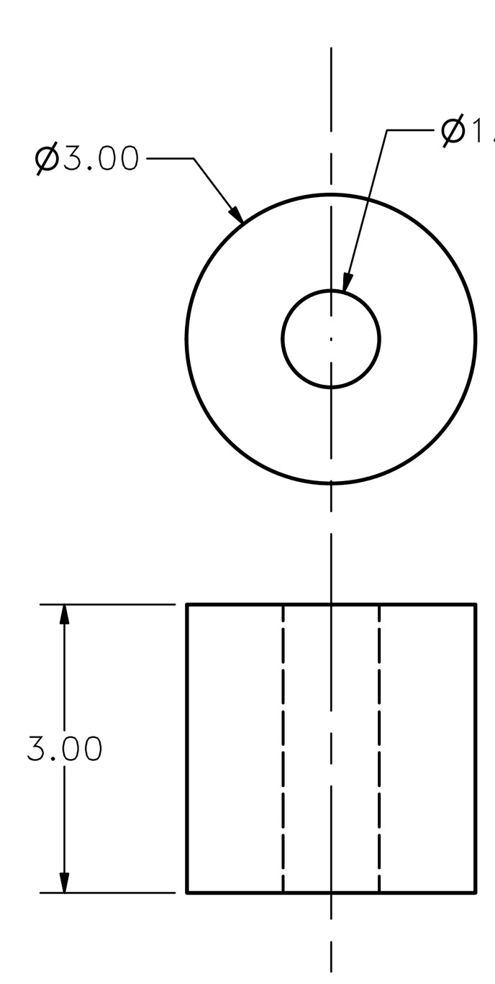
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL

NOTES

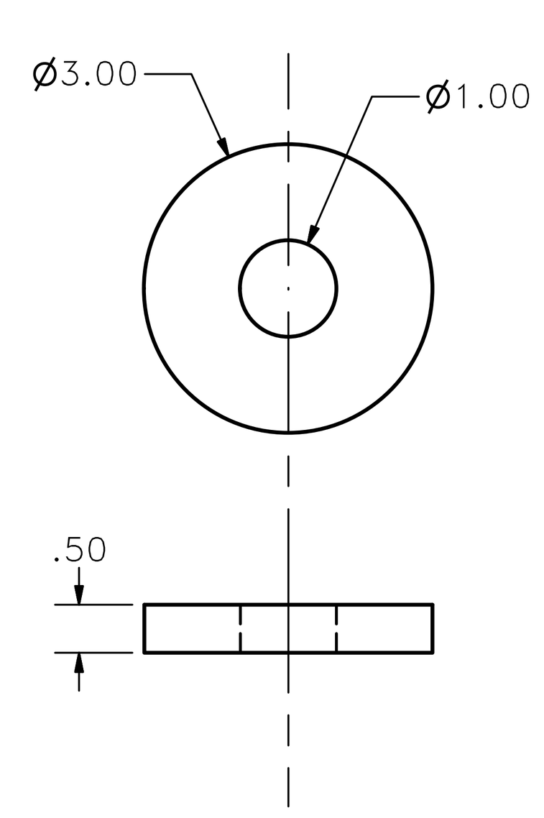
1. SEE GENERAL NOTES ON SHEET 20121601.



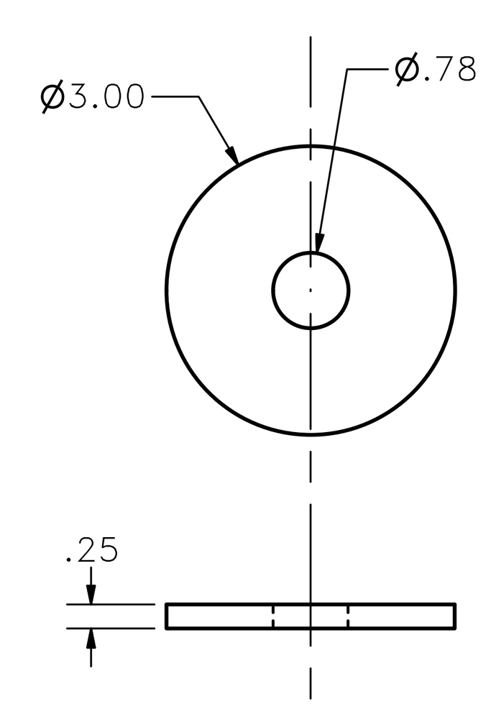
① LEG ASSEMBLY



④ SHOCK MOUNT



⑤ SHOCK MOUNT



⑥ WASHER

QTY	ITE	PART NUMBER	DESCRIPTION	MANUFACTUR	SPEC	MATERIAL
	6	20121610-6	SHOCK MOUNT WASHER		ASTM A666	UNS S31600
	5	20121610-5	POLYURETHANE, ASTM D 2000 M6BG 910 F17		ASTM D2000	POLYURETHANE
	4	20121610-4	POLYURETHANE, ASTM D 2000 M6BG 910 F17		ASTM D2000	POLYURETHANE
1	3	20121610-3	1" THICK PLATE		ASTM A666	UNS S31603
1	2	20121610-2	L 4" X 4" X 1/2		ASTM A276	UNS S31603
	1	20121610-1	LEG ASSEMBLY			

PARTS LIST

PART DASH NO.	NEXT ASSY.
-6	20121602-1
-5	20121602-1
-4	20121602-1
-1	20121603-1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN FEET AND/OR INCHES

TOLERANCES:	
.X DECIMALS	±.03
.XX DECIMALS	±.01
.XXX DECIMALS	±.005
FRACTIONS	±1/8
ANGLES	±1°

PROJ NO.
NFESC DWG. NO. 20161610
DES. DRAWN
CHECKED PDQ
BRANCH HEAD KIT MACK
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SATISFACTORY TO
APPROVED GOOFY DATE
COMMANDING OFFICER
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FOR COMMANDER, NAVFAC

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NAVAL FACILITIES ENGINEERING SERVICE CENTER
PORT HUENEME, CALIFORNIA 93043

3K TWPS
MEDIA FILTER
LEG ASSEMBLY

SIZE F | CODE IDENT NO 80091 | NAVFAC DRAWING NO.
CONSTRUCTION CONTRACT NO.
SCALE NONE | SPEC NONE | SHEET 10 OF 10

IF IN DOUBT, ASK - DO NOT SCALE

J2011-39